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ABSTRACT

The impact of developments in work organizations on the skilling process in the United Kingdom was studied through a macro analysis of available statistical information about the development of workplace training in the United Kingdom and case studies of three U.K. firms. The macro analysis focused on the following: initial training arrangements; routes to training and vocational qualifications; continuing education and training; volume of training in Great Britain; recipients of training; sources of funding for continuing training; employer motives for training; continuing training by industrial sector and firm size; and the U.K. labor market and industrial relations trends. The case studies examined the organizational structures and training practices of a major British motor vehicle manufacturer, a large U.K. banking group, and a chemicals manufacturing subsidiary company of a large multinational petrochemical corporation. It was discovered that approximately half the British work force receives some training. Because most training was being provided to workers already in possession of formal qualifications, however, workplace training appeared to do little to overcome the problems associated with the generally low level of initial vocational training in Britain. (Thirty-nine tables/figures are included. The bibliography contains 23 references.) (MN)

ED 412 393

CEDEFOP Document

The role of the company in generating skills

The learning effects of work organization

United Kingdom

European Centre for the Development of Vocational Training

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The role of the company in generating skills
The learning effects of work organization
United Kingdom

Authors
Kenneth Walsh
Andy Green
Hilary Steedman

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Marinou Antipa 12, **GR-57001 Thessaloniki**
Tel. (30-31) 49 01 11; Fax (30-31) 49 01 02
E-mail: info@cedefop.gr

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FOREWORD

Numerous continuing vocational training studies at both the national and Community level, especially those carried out by CEDEFOP on continuing training policy in large enterprises, have revealed the expanding role being played by enterprises in the development of human resources. This trend - which some see as heralding the emergence of a new division of responsibilities between those involved in training and production - undoubtedly calls into question their existing relationship and respective activities.

These studies also imply that, when it comes to strategies for developing human resources within enterprises, formally organized continuing training is only one of the options available for generating the "new" skills and competences considered necessary by enterprises. There are now organizational models geared to providing apprenticeship opportunities by exploiting the training impact of work situations, thus enabling a dialectic to be established between "formal apprenticeship" and "informal apprenticeship" (via work organization and cooperation between employees in the production and innovation process).

While they may make converging structural trends apparent, these new organizational models take on different forms and need not necessarily have any general application. The considerable difference between the contexts in which these models emerge means an analysis needs to be conducted of the relationship between an enterprise and its environment if there is to be an understanding of how the organizational models fit into the social context and what the scope and limitations are in a transfer of such models.

The primary objective of the present series of studies being undertaken by CEDEFOP in nine countries[1] is to establish the impact of developments in work organization on the skilling process and, more especially, to pinpoint the links between these developments and opportunities for formal and informal apprenticeships. These studies also enable light to be thrown on the nature of skills and competences which can emerge in the context of new types of organization and allow assumptions to be made about the impact of these developments on training systems.

A twin track analysis is pursued below. At the **macro level**, an attempt is made to "reposition the enterprise in the chain of skill generation" and to provide an interpretation of the mutual links between initial training, continuing training, the labour market and industrial relations. At the **micro level**, the aim - based on enterprise case studies - is to throw light on the various aspects of organizational innovation, developments in skills and the on-the-job apprenticeship process, in particular work-based and work-influenced forms of apprenticeship and how they relate to formal apprenticeships. In each country, enterprises were required to have a "marked

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[1] Belgium, Denmark, France, Germany, Italy, the Netherlands, Portugal, Spain, United Kingdom

and relatively stable level of organizational innovation" to qualify for case study selection.

The present report deals with both these aspects without necessarily looking at all the cases studied. These are the subject of an analysis examining how the macro level interacts with the micro level which is presented in the summary that concludes this report.

Finally, a cross-sectional analysis based on the national studies identifies the converging and diverging developments which emerge in relation to their social context, notes the impact of these developments on the training systems and raises questions in respect of social dialogue and training policy decisions. This analysis is the subject of the summary report on "The role of the enterprise in the generation of skills: the training impact of work organization", published in the CEDEFOP Document series.

Our warm thanks go to those responsible for the studies at the national level and to all the members of the research teams and companies involved in their successful conclusion.

Fernanda Oliveira Reis

Frédérique Rychener

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Renneth Walsh Director, Training & Employment Research Network, 7 Station Road, Stottesdon, Kidderminster, Worcs DY14 8TT, UK. Tel & Fax: + 44 74 632 530

Andy Green Post-16 Education Centre, Institute of Education, 55-59 Gordon Square, London WC1H ONT. Tel: + 44 71 580 1122 Fax: + 44 71 612 6366

Hilary Steedman Senior Research Fellow, National Institute of Economic and Social Research, 2 Dean Trench Street, Smith Square, London SW1P 3HE. Tel: + 44 71 222 7665 Fax: + 44 71 222 1435

INTRODUCTION

1.1 BACKGROUND

This report brings together the findings from the two separate, though interrelated stages of a study for CEDEFOP, the European Centre for the Development of Vocational Training, on the process of acquiring skills and qualifications in the workplace. The report provides a United Kingdom perspective and is part of a wider European Community study on the subject commissioned by CEDEFOP and involving research teams from most of the EC member states.

The UK study was co-ordinated by the National Institute of Economic and Social Research (NIESR) with contributions from researchers at the Institute of Education (University of London) and the Training & Employment Research Network (TERN). The employer case studies (section 3) would not have been possible without the close co-operation of staff at different levels in the three organisations agreeing to take part and their cooperation is gratefully acknowledged. All three firms have had the opportunity to comment on their written case studies and comments received have been incorporated as necessary. However, the views expressed in this report remain those of the authors.

A principal aim of the comparative research was to try and understand the diversity of approaches to continuing training in firms and to share experiences between countries. The basic premise was that continuing vocational training was becoming more important in many firms under the converging pressures of demographic change (the ageing workforce and a smaller supply of young people) and industrial restructuring which rendered many traditional jobs and expertise redundant.

However, preliminary research at CEDEFOP also detected many human resource pressures within organisations that would put pressure on firms to deliver more continuing training. Fundamentally these pressures included the quest for formal qualifications that gave transferability in an increasingly fluid labour market and the need to develop jobs and competences for career development (both within and outside existing employment situations).

As with change in the enterprise, there is often great change in national policy towards training and this report can only provide a snapshot of the situation at the time of writing. This is certainly the case in the UK with the development of National Vocational Qualifications (NVQs), the incorporation of colleges of further education (giving them financial autonomy) and, of course, the development of the Training and Enterprise Councils (TECs) and their Scottish equivalents (Local Enterprise Companies or LECs). It will be some time before many of these initiatives can be fairly judged, meanwhile further change is happening and will continue to happen in the future.

1.2 STRUCTURE OF THE REPORT

This report contains three further sections. Section 2 provides a macro perspective on the development of workplace training in the UK using the somewhat limited statistical information available. It puts the current developments of NVQs and TECs in the context of experiments with other forms of national training policy such as statutory Training Boards and training programmes for the unemployed.

Section 3 concentrates on a detailed discussion of the three case study firms. For each there is a presentation of their organisational structures and detailed analysis of the methods of operation in each of the workplaces studied. Each of the case studies is completed by a short synopsis of the main findings as they relate to the broader study objectives.

Finally, section 4 attempts an overview and synthesis of both parts of the overall study, highlighting the strengths and weaknesses of the UK approach to continuing training and suggesting the directions for future policy.

SECTION 1 :

MACRO ANALYSIS

2.1 Initial Training Arrangements

No provision is made within the compulsory education system in the UK for the acquisition of recognised vocational qualifications. However, proposals from the Dearing Report (1993) to allow schools to offer courses to pupils aged 14-16 leading to vocational qualifications, are now (1993) under consideration by the government. Compulsory schooling ends at age 16 and it is at this point that individuals start out on the process of vocational training and acquiring specific as well as general vocational qualifications. A variety of routes and methods of financing such training is available to young people who wish to obtain vocational qualifications on leaving school. The distribution of young people according to the different routes followed is given in Figure 2.1.

Figure 2.1: Participation in Education & Training ages 16-18 (UK 1990)

Activity	Percentage
In schools or full-time further education	40
In part-time further education	16[1]
Youth Training	15
Unemployed/in Employment/Destination Unknown	29
Total	100

1) Includes part-time evening students

Source: DES Statistical Bulletin 9/90

Figure 2.1 shows that 29 per cent of 16-18 year olds were in full-time employment or unemployed. A further 15 per cent were in government-funded Youth Training (YT), receiving a small weekly allowance and some form of guaranteed training provided off-the-job. Around 40 per cent of all 16-18 year olds are in full-time schooling, normally studying for academic or vocational qualifications and a further 16 per cent are in full or part-time further education colleges where they may be studying for vocational or academic qualifications (or both).

2.2 Routes to Training and Vocational Qualifications

Further education colleges are funded partly by local education authorities, partly by central government and partly by local and national employers. These colleges are normally large institutions which provide for adults and initial trainees and the typical college has several thousand students either full or part-time. There are some 500 colleges in the UK; the distribution of students between vocational and general studies and between full and part-time courses is illustrated in Figure 2.2. It can be seen that one quarter of all 16-18 year olds in further education are enrolled on courses leading to general education qualifications and around 150,000 in any one age group are enrolled on vocational courses.

Nationally recognised vocational awards are made by a number of different bodies in the UK[2]. The awards from such bodies are not well co-ordinated with each other and an award from one body does not give access to courses leading to an award by a different body. Furthermore, since awards are frequently re-named or reformulated, their value is not well understood by employers and is not always valued by them.

There is a strongly held view in the UK that the reluctance of young people to embark on vocational education and training may be the result of a lack of transparency and coherence in the provision of vocational qualifications. More recently, the National Council for Vocational Qualifications (NCVQ) has been set up to co-ordinate the work of the examining bodies. The NCVQ has introduced fundamental change in modes of assessment of vocational skills which have affected the way vocational qualifications are awarded in colleges, though it is too early to assess the full effects of such change.

Figure 2.2: Distribution of Students in Further Education
(UK, 1988, course enrolments, 000s)

Students aged 16-18	BTEC & SCOTVEC	RSA	C&G	GCSE,GCE CSE, SCE	Other	Total
Full-time	113.3	8.9	56.1	94.2	40.4	312.9
Part-time day	92.6	11.5	151.6	23.4	16.0	295.1
Evening only	5.6	16.0	10.2	63.0	12.8	107.6
All modes	211.5	36.4	217.9	180.5	69.3	716

Source: DES Statistics of Education 1990

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2 The Business and Technician Education Council (BTEC) is a company limited by guarantee which is governed by a council with a chairman and 25 members appointed by the Secretary of State for Education. It operates through nine boards covering: agriculture; business and finance; computing and information systems; construction; design; distribution; hotels, catering and leisure; engineering; science and caring; and management. It concentrates on those in employment or preparing to enter employment, though is a validating rather than an examining or assessing body.

There are several modes of attendance: full-time, day release, evening, block release, sandwich, distance and open learning. Its major provision is initial training for young people aged 16 and over and units are grouped to provide between one and three years of study. There are three levels, the First, National and Higher National Certificates/Diplomas. It is generally considered that those attaining National Certificates would go on to craftsman-level occupations whereas those attaining Higher National Certificates would pursue technician-level occupations.

The City and Guilds of London Institute (C&G) is an independent body registered as an educational charity and governed by a council of representatives from founder bodies together with elected and co-opted members from the D&S and Employment Department. The C&G works through 25,000 education and training centres in the UK and overseas including all local colleges of further education. The C&G Part 2 is acknowledged as providing a 'craftsman-type level of competence'.

Royal Society of Arts Examination Board (RSA) originated commercial and technological examinations in England in 1856. In 1987 it separated formally from the Royal Society of Arts by establishing itself as a company limited by guarantee with charitable status. Its activities cover a large range of vocational and prevocational education and training and it is the largest UK provider of certification for those wishing to enter office-based occupations.

Youth Training

As can be seen from Figure 2.1, Youth Training (YTS) on employers' premises, subsidised by government funds, is the main route for initial training in the UK. Training of 16-18 year olds in the UK therefore predominantly takes place on employers' premises, with some part-time off-the-job training largely in colleges of further education. Reliable data on vocational qualifications obtained by 16-18 year olds (as opposed to course enrolments) is difficult to assemble. Figure 2.3 shows the total numbers (all ages) obtaining qualifications in a wide range of technical and vocational areas in 1989.

It may help to assess the adequacy of such flows to examine Figure 2.4 which shows the changes in stocks of vocational qualifications held by the UK labour force during the 1980s. From Figure 2.4 it can been seen that flows of vocationally qualified individuals were sufficient only to maintain stocks at a low level relative to countries such as Germany and the Netherlands and flows were not sufficient to substantially increase the stocks of vocationally qualified individuals in the labour force.

From this analysis two main conclusions emerge. Firstly, current efforts in the field of initial training are not sufficient to make good the UK deficit relative to other European countries of certified skills. Secondly, the long-standing nature of the deficit means that British companies need to invest substantial resources in adult employee training at relatively low levels in order to remain competitive in world markets. Even high-level employee skills may remain uncertified in British firms because of the lack of a nationally organised training and qualifications framework. Training of adult employees therefore assumes particular significance in the British context.

Figure 2.3: Numbers Obtaining Craft[1] and Technician Level[2] Qualifications in Technology
(UK except Scotland, 1989)

Subject	Craft	Technician	Craft &Technician
Computing		4200	4200
Construction	13400	6600	20000
Design		4700	4700
Engineering	22600	14500	37100
Science		4000	4000
Total	36000	34000	70000

1) City & Guilds Part 11, courses Nos: 205, 215, 216, 217, 236, 224, 558, 585, 595, 597, 594, 614.
2) The technician level has been defined for the purposes of this study as those attaining the BTEC Higher Certificate and Diploma as well as those who attain the BTEC National Diploma without progressing to the Higher National Certificate or Diploma. The calculation used was to add to HNC and HND figures and estimate for OND numbers based on the assumption that one quarter of those attaining higher diplomas and certificates have previously attained a National Diploma.

Source: NIESR.

Figure 2.4: Vocational Qualifications of the UK Labour Force (1979 and 1988)
(Percentage of total labour force)

Qualifications Level	1979	1988
No vocational or educational qualifications[1]	46	30
No vocational qualifications some educational quals[2]	23	34
Total without vocational quals	69	64
Lower intermediate[3]	18	20
Higher intermediate[4]	5	6
Total intermediate voc quals	23	26
Degree or above[5]	8	10
Total	100	100

Notes:
1. Those declaring no educational or vocational qualifications.
2. 0.70 of 'other qualifications', one or more CSE below Grade 1, one or more 0-level or equivalent, one or more A-level or equivalent.
3. All trade apprenticeships completed (1979 all uncompleted trade apprenticeships), all City & Guilds, all BTEC ONC/OND and equivalent, 0.13 of 'other qualifications'.
4. All BTEC HNC/HND qualifications, post A-level Secondary and Primary teaching qualifications, nursing qualifications. 5. 0.17 of 'other qualifications', all degree level and postgraduate level qualifications, membership of professional institutions.

Source: NIESR

2.3 Continuing Education and Training

Evidence already cited suggests that both the stock and flow of vocational qualifications in the UK is relatively low. This does not necessarily mean that its workforce is undertrained or under skilled. It is possible that training activity is widespread, but does not usually lead to formal qualifications. Alternatively, working people might receive little formal training but achieve competence through learning on-the-job. Both situations could lead to a workforce that is highly skilled without being certified as such. There are certainly many British employees performing skilled operations who do not possess academic or vocational qualifications (Hart & Shipman 1991).

If the lack of qualifications does reflect a relative absence of skills, the UK might still remain competitive in high-skill industries if its skills make relatively more efficient use of those skills they possess. There may be fuller utilisation of skills on-the-job than occurs in other economies where these skills are more plentiful. Or the advanced skills of a small number of qualified workers might effectively substitute for greater basic skills among the rest of the workforce.

However, comparisons of labour productivity indicate relatively poor performance in the UK in both manufacturing and services and suggest that the quality of human (rather than physical) capital may be the principal cause (see, for example, Mason, Prais & Van Ark 1990 and Prais, Jarvis & Wagner 1989).

Even if there is currently no problem, reliance on informal skills or low-skill processes may produce problems in the future. It could confine the economy to industries and processes

whose growth prospects are poor, either because of falling demand or increasing competition from lower-wage economies. Difficulties in introducing new technology may require lower real wages to compensate for lower productivity. In addition, the capacity to re-allocate labour to higher growth applications may be limited by lack of formal training in more general skills.

The recent rise in the flow of new qualifications suggests a realisation by employers and employees that formal skills training is becoming more important. For employers, many new manufacturing and service processes tend to require 'analytical' capacities (to understand operations, identify problems, react to new information, etc) as well as the 'mechanical' capacity to perform a given task. These analytical capacities must generally be developed off as well as on-the-job and can only be measured by formal testing. For employees, certification is increasingly necessary not only to secure promotion in their current workplace, but also to demonstrate their competence to a new employer. Employers are therefore more willing to pay for training and employees are more willing to receive it.

Because the stock of qualifications is low, and because the 'flow' from initial training will alter it only slowly (the school leaver cohort is less than 0.5 million out of a total working population of 28 million) there is also an incentive to give continuing training to adult employees. 'Continuing' training is here defined as training given to adult employees who were either employed in the firm before training began, or had moved there from another job. It therefore excludes apprentices and youth trainees (on their first job since entering the labour market) and unemployed adults on training courses (non-job related training such as first-aid and retirement preparation courses are also excluded from the definition). Training is designated as 'formal' if it involves assessment leading to certification (either on or off-the-job) and 'informal' if it does not.

The following discussion sets out to answer a number of related questions as follows:

- What volume of continuing training takes place?
- How is this balanced between on and off-the-job training?
- Which type of employees receive it?
- Who finances it?
- What are the motives for giving it?
- Which industries and types of firm provide most training?
- Is training under-supplied in the UK?
- Does continuing training make up for the relative lack of initial training?

In answering these points reference is made to four principal sources of informations described below:

Labour Force Survey. This annual survey is based on a sample of economically active households in Great Britain. Questions on training refer to that received during the four weeks prior to the interview, on or off-the job. The main advantage of this survey is that it combines training information with considerable detail about an individual's social and economic status. The main disadvantage is the short reference period for training which may exclude recently completed college courses plus the fact that it may over-represent short, intermittent courses.

Training in Britain - Individuals' Survey: This special survey was conducted in 1987 by the Policy Studies Institute for the (then) Training Agency. It used a sample of around 2600 economically active adults aged 19-59. Recently-trained adults and unemployed adults seeking work were over-represented in the original sample, although published results are weighted to compensate for this. Questions on training are more detailed than those in the LFS, especially regarding expectations of training. Training here is defined as that received in the last three years and so whilst the survey excludes most of those on YTS at the time of the survey (YTS is normally completed by age 18) it includes those whose most recent training experience was a YTS course.

Training in Britain - Employers' Survey: This special study, also for the Training Agency, was conducted by IFF Research and was based on a sample of around 1600 business establishments in 1987. Of the 1484 which claimed to have administered training, 832 answered an additional questionnaire about on-the-job training. Questions on training referred to that administered in the previous 12 months and results were weighted to account for an over-representation of large firms in the sample (firms with fewer than 10 employees were excluded) and for an assumed differential non-response between trainers and non-trainers. The survey provides detailed results on the incidence, duration and costs of training and distinguishes between on and off-the-job courses. Published tabulations tend, however, to confuse public with private sector training and youth with adult training. There are no classifications by gender.

Workplace Industrial Relations Survey 2: The second WIRS was conducted in 1984 and the management questionnaire from the survey contained questions on the introduction of new technology and its effects on skill needs among manual and non-manual workers. There was also a question on the need for formal training when promoting or transferring staff. Unfortunately respondents were not asked whether changes in skill needs were answered by training. However, despite the age of this survey, it is still useful as it refers specifically to the training and skill needs of existing adult employees.

2.3.1 The Volume of Training in Britain

Although the output of formal qualifications is relatively low in Britain, up to half the workforce has been in receipt of some form of training recently. The *Training in Britain* employers' survey produced estimates of the number of employees receiving on and off-the-job training in the year to mid 1987 and the total training days provided, from which the density (ie, training days per employee) and intensity (training days per trainee) were calculated. These figures are reproduced in Figure 2.5.

Figure 2.5: Volume of Training in Britain (1987)

Type of Training	Trainees (000s)	% of total	Training Days (000s)	Days per employee	Days per trainee
On-the-job	5872	32.9	64696	3.4	10.3
Off-the-job	6206	34.8	60672	3.6	10.4
Total	8622	48.3	125368	7.0	14.5

Source: IFF (1990) Table 4.1.

Since this survey will be used extensively in the following discussion, some possible criticisms of its reliability should be raised. The national figures are generalisations from a sample of 1,618 private companies (total employment just under 2.5m).

The method of coding responses at interview, simulating missing values and weighting during aggregation, are all possible sources of error. The measures are of training 'input', much of which does not result in recognised vocational qualifications. Though this is the most detailed recent data available, it should therefore be treated with caution.

In the figures used, training 'incidence' denotes the proportion of the workforce in receipt of training in the previous 12 months; 'density' is the number of training days per employee; and 'intensity' is the number of training days per trainee.

Figure 2.6: Scale and Intensity of Training by Sector (1987)

	Private Sector		Public Sector
	Manufacturing	*Services*	
Incidence (%)	36	49	59
Days per employee	5.4	6.6	9.0
Days per trainee	15.1	13.4	15.2

Source: IFF (1990) Table 4.2

Figure 2.7: Training by Employee Type (1987)

	Proportion trained	Days per employee	Days per trainee	On-the -job	Off-the -job
Apprentices/ youth	86%	45	53	15	47
Other new recruits	65%	9	14	11	8
Existing employees	48%	5	11	10	7

Source: IFF (1990) Figure 4.5

Training provision appears most widespread in the public sector, but the allocation to trainees is almost as generous in private manufacturing, as shown in Figure 2.6. To calculate how much of this was continuing training it is necessary to separate youth training (apprenticeships and trainee ships, including employer based YTS) from other forms of training. The survey reported an allocation of training amongst employee types as shown in Figure 2.7.

All types of training, but especially off-the-job courses, are concentrated on apprentices and other youth trainees. The survey estimates that there were 650,000 in the sectors covered (compared with over 20 million adult employees). This suggests that youth

trainees, who constituted less than 4 per cent of the workforce, received nearly one third of all training days and almost half of all off-the-job training days, as shown in Figure 2.8.

Figure 2.8: Proportion of Training going to Apprentices and Youth (1987)

	On-the-job	Off-the-job	Total
Total training days	60672	64696	125368
Youth training days	9750	30550	34450
Proportion to youth	16%	47%	27%

Source: Figures 2.5 and 2.7.

Non-youth training goes mainly to newly recruited employees. Less than half of existing adult employees are given any training and those that do so receive less than two weeks per year, most of it on-the-job (Figure 2.7).

The Training in Britain survey of individuals reports the incidence of training by age and also identifies training not arranged and funded by the employer. The results are summarised in Figure 2.9. The age groupings reflect the concentration of training on youth recruits. This suggests that in the mid 1980s, about three-quarters of economically active people received some training between the ages of 16 and 19. After this, training incidence declined steadily with age. Less than half of those over 22 had received any training beyond whatever youth training they were given. However, about one third of adults continued to receive some form of training until their mid-40s. To both employer and employee, the value of training is likely to decline with age because there is less remaining working time in which to exercise the new skill or enjoy its financial benefits. Higher costs of training for older workers resulting from greater foregone output (or foregone earnings if the trainee's wage is adjusted downwards to compensate) are also a likely cause of the decline.

Figure 2.9: Proportion of Different Age-Groups Receiving Training in Previous 12 months

Age Group	Source of Funds (percentages)			
	Total	*Employer*	*Other*	*Both*
19	73	25	46	2
20-21	58	27	26	5
22-24	47	25	17	5
25-34	36	27	6	3
35-44	31	24	5	2
45-54	23	20	2	1
55-59	12	11	-	1

Source: PSI (1990) Table 2e

The 'other' sources of funding are principally YTS allowances for post-school training and other subsidised further education. Their accessibility tails off sharply after the age of 25, at which point employees become dependent on their employer to fund further training.

2.3.2 Recipients of Training

Among existing employees, formal vocational training is most likely to be given to those already possessing academic qualifications, vocational qualifications or demonstrated skills. Figure 2.10 shows, for the 16-19 age group, the proportions of those of different measured attainments who had recently received training in the Spring of 1989.

Almost half of those with higher education had received job related training in the previous four weeks, whereas for those with no qualifications less than 10 per cent had done so. Employers concentrate training on better qualified staff because they are expected to make better use of their new skills in their current jobs and are more likely to be promoted to new jobs requiring more skill.

Figure 2.10: Receipt of Training by Highest Qualification
(Percentages)

Qualifications	Total	Males	Females
Higher education	47.1	*	*
A Level or equivalent	36.2	42.6	28.7
O Level or equivalent	25.7	29.6	22.6
CSE below Grade 1	17.4	18.9	15.7
YTS certificate	18.2	*	*
Other	11.4	*	11.1
None	7.5	9.4	5.3
All Qualifications	22.9	26.3	19.7

* Denotes cell below 10,000 giving unreliable estimate

Source: Training Statistics 1990, Table A6.6.

Figure 2.10 also shows that at all levels women are less likely to receive training than men with equivalent qualifications. This results mainly from the higher proportion of women who work part-time (since figures refer only to employees it cannot be attributed to differences in the participation rate).

Using responses to the 1987 British Social Attitudes Survey (Booth 1991) confirms that age and general/vocational qualifications are the main determinants of receipt of further training. The results of this work suggest that public sector workplaces train more than private, that training activity increases with the level of union coverage and that part-time

status reduces training prospects only for women (with the implication that employers may be discriminating against them for other reasons).

Figure 2.11 shows the allocation of training at different initial grades. Managerial and professional employees are most likely to receive training and they also receive the greatest amount (the equivalent to over two weeks in the year). Although almost the same proportion of unskilled manual workers as non-manual workers receive training, it is of less than half the duration of the former. Training for lower grades is biased towards on-the-job instruction, as illustrated in Figure 2.12.

Figure 2.11: Training Given to Established Employees by Grade (1987)

Grade	Proportion trained	Days per employee	Days per trainee
Unskilled manual	46%	3	7
Skilled/semi-skilled	37%	4	8
Non-manual	47%	5	10
Management/professional	58%	9	15

Source: IFF (1990) Table AV.6.

Figure 2.12: Training Days per Trainee by Grade (1987)

Type of training	Manual/personal service	Semi/Skilled manual	Other Non-man	Man / Prof
On-the-job	8	9	11	13
Off-the-job	5	14	8	13
Total	9	16	13	18

Source: IFF (1990) Figure 4.6.

Skilled and semi-skilled manual workers receive most of their training off-the-job, reflecting the concentration of college based courses for these occupational categories. Managerial and professional employees receive an equal balance of on and off the-job instruction, although on-the-job is harder to define here since some non work-relate activity may take place on the employer's premises. Training is shortest for lower-skilled manual and non-manual employees and is predominantly on-the-job.

Figure 2.13: Off-the-job Training Incidence and Intensity by Industry (1987)

Intensity	High	Incidence Medium	Low
High	Health	Metal goods	Electrical eng Mechanical eng Construction Textiles/clothing
Medium	Energy/extractive Local government Finance/services		Other processing
Low	Central government Retailing Education	Catering Chemicals & minerals	Wholesaling

Source: IFF (1990) Figure 4.4

More evidence of the tendency to build on existing skills comes in the comparison of training incidence (ie, the proportion of the workforce receiving training) and intensity (ie, training days per employee) provided by the IFF 1987 survey, summarised in Figure 2.13 for off-the-job courses.

Private manufacturing trains a small number of employees intensively. Public and private services spread their training more thinly. The pattern for total training is little different except that education, energy/extraction and finance/business services move to a higher intensity bracket because of their larger on-the-job programmes.

These findings conform to the traditional pattern of UK education and training in which it is concentrated on a relatively small number of professionally qualified non-manual and apprentice trained manual workers, all carrying out skills on behalf of the majority. Sorge et al (1983), for example, found that large German plants introducing CNC equipment were generally able to leave programming to craft workers, whereas comparable British plants with a smaller skilled craft base made more use of specialist programmers. Steedman et al (1991) provide evidence that skilled technicians in British plants tend to be 'drawn down' to troubleshoot on the shopfloor and graduates are then required to fill in for the technicians.

2.3.3 Sources of Funding for Continuing Training

There are three possible sources of finance for formal training as follows:

Employers pay fees for off-the-job courses and on-site trainers, meet the overhead cost of on-site training facilities and incur foregone output when employees suspend their normal work to give or receive training (unless the wage covering training periods is adjusted downwards to compensate for the fall in productivity).

Employees can take over some of these costs from the employer if the trainee wage is adjusted to compensate for output foregone or if instruction is taken outside normal work time. Course fees may also be deducted from employees' current or future wages.

Government can defray employees' and employers' training costs through subsidies and tax concessions. In the UK some employers' training programmes are subsidised through the *Employment Training* and *Youth Training* programmes and through government funding of the Training and Enterprise Councils (TECs) and their Scottish equivalents the Local Enterprise Companies (LECs) who administer these programmes. Employees can claim tax relief on income spent on training. Government also provides vocational preparation during compulsory schooling, which may reduce both employers' and employees' training requirements later on.

The most detailed attempt to determine employers' expenditure on training in the UK is the previously cited Training Agency/IFF Employers' Survey of 1987. This used a sample of 1,618 establishments of which 1,484 had provided some training in the previous 12 months to the survey and whose responses were weighted for representativeness of all UK establishments scaled up to produce a total figure for the country as a whole. Public services (including education, health, central and local government) and the then nationalised industries (ie. Post Office, Telecom, Coal, Gas, Electricity and Water) were sampled along with private firms with more than 10 employees. The findings are summarised in Figure 2.14.

Figure 2.14: Employers' Expenditure on Training 1986-87

	All Employers (£s bn)	Private Sector (£ bns)	Per Trainee (£s)
1987 (1987 prices)	14.4	9.2	1685
1987 (1990 prices)	17.9	11.4	2100

Source: IFF (199O) Paragraphs S14-15

The total of £14.4bn represented approximately 4.6 per cent of GDP in 1987 (IFF 1990 Paragraph S14). It comprised some £ 6,838 m (47 per cent) spent on on-the-job training, £ 5,847 m (41 per cent) for off-the-job training and the remainder of £1,715m (12 per cent) on overhead expenses. On-the-job costs are measured by adding trainee labour costs of £2.7bn to trainers costs of £4.2bn (where 'labour cost' is the wage bill net of value-added). Off the-job costs comprise a variety of elements of which the greatest are trainee labour costs (£2.6bn), internal trainers (£O.94bn) and training facilities (£O.85bn).

In the same year, private sector employers spent £62.2bn on gross fixed capital formation (CSO 1991 Table 9). Therefore, private human capital investment was only about 15 per cent of that on physical capital. The public sector was more balanced with £5.2bn on training against £11.6bn gross investment, reflecting the more labour-intensive nature of many public services. While the two forms of investment are likely to be complements rather than substitutes, it seems that human resource development expenditure is small

compared with that on physical capacity. There have been informal reports of increased training effort by employers since 1987, however no comparable surveys are available to confirm this.

To assess the government's contribution to training expenditure, Figure 2.15 shows the Employment Department's training programme expenditure in 1986-87 and 1989-90. Adult training involved a variety of initiatives (mainly aimed at those unemployed for more than six months) which, by 1990, had been subsumed under the Employment Training programme.

Figure 2.15: Government Expenditure on Training
(in £s million at current prices)

	Total	Adult	Youth	Further Education	Schools
1986-87	1344	288	874	110	70
1989-90	2667	1112	1010	101	117[1]

1) Estimated Outturn

Source: Government's Expenditure Plans

Youth training came under the two-year YTS offered to all school leavers at age 16 plus, either as a non-workplace based programme or as a subsidy to employers' training programmes. The IFF (1990) employers survey found that grants to employers for YTS and related programmes totalled £451m in 1986-87. This suggests that just over half of that year's YTS outlay went as a subsidy to employers with the remainder spent on non-employer based schemes. The average cost per trainee in ET and YT (about £2,500 and £5,400 respectively in 1990) exceeds estimated private sector expenditure per trainee. It is not clear, however, whether this reflects a higher quality of training since many placements on these schemes do not lead to recognised qualifications.

Expenditure on further education relates to 'work-related' further education and this was a central government subvention to local education authorities which at the time administered colleges of further education (since April 1993 colleges have been funded through the Further Education Funding Council, though TECs retain some local influence through the Work-Related Further Education budget). The expenditure listed under schools centred on the 'Technical and Vocational Training Initiative' (TVEI) which encourages vocational elements within the 14-18 school curriculum but does not lead to any recognised vocational qualifications.

Government expenditure on training, totalling just over £2.7bn in 1989-90 (with the addition of £93m in grants from the EC) is small relative to that of both private and public sector employers. It is also aimed predominantly at unemployed school leavers and adults (of the 398,700 on YTS in August 1987, 272,000 were non-employee trainees). The substantial rise in adult training between 1987 and 1990 absolutely and relative to

youth training mainly reflects the shift in political concern from youth to long-term adult unemployment. Only perhaps half of the £bn YTS budget and £.lbn for further education provision can be considered as subsidies to employer or employee-funded training.

Despite a renewed rise in adult unemployment, Employment Training has been cut back (by 18 per cent in 1992-93) with government shifting its priority from training to assisting job search activities of the unemployed with their existing skills (Gregg 199 1) .

2.3.4 Employers' Motives for Training

Since employers appear to be the main financiers of vocational training, it might be expected that their motives will be reflected in its scale and allocation. Figure 2.16 shows how employers in 1987 ranked their reasons for making additional training provision in the previous 12 months.

Perhaps the most interesting finding is that the number of employers who trained to increase competitiveness (56 per cent) is more than twice the number which did so because of recruitment problems (24 per cent). There was a widespread willingness to upgrade skills even when skill shortages had not been experienced, implying a degree of forward planning. Deployment of new technology was not given as a separate option, but employers who trained because of it may have cited customer or supplier requirements as a reason.

Figure 2.16: Employers' Motives for Increased Training Effort (1987)

Reason	Percentage of firms
Need to improve competitiveness	56
Legal requirements to train	36
Offer of YTS or other scheme subsidy	29
Need to meet customer requirements	25
Skill recruitment problems	24
Need to meet supplier requirements	14
No external influence	14
Industry Training Board requirements	12
Other training organisation requirements	8
Trade union agreement	3
Other	4

Source: IFF (199O) Figure 6.1.

Although a positive factor (competitiveness) comes top of the list, two negative factors were the next most popular, firms trained because they had a legal requirement to do so (for example under health and safety regulations) or because the then Manpower Services Commission (MAC) offered them a financial incentive. This last point might confirm a suspicion, which certainly existed in 1987, that YTS and other programmes were intended subsidise employers and reduce unemployment rather than to actually offer vocational training.

An alternative view is provided by employers' reasons for not offering any training, summarised in Figure 2.17. Although the 'poaching' of trained staff is widely feared by employers, it seems that few are completely deterred by it. However, over 40 per cent of respondents who admitted to being non-trainers, were happy to recruit additional skills from outside which may have involved poaching from other employers. Among firms which had given training, 38 per cent reported problems of trainees leaving for better pay and prospects, 26 per cent reported problems of trainees wanting more money and 22 per cent had problems of trainees wanting more responsibility (IFF 1990).

Figure 2.17: Reasons Offered by Non-Training Firms (1987)

Reason	Percentage of firms
Workforce static and adequately skilled	51
Necessary skills can be recruited	42
Work does not require (formal) skills	32
Responsibilities could not be increased	9
Employees would leave if trained	1
Other	4

Source: IFF (1990) Figure 8.3.

The most popular explanation for not training was that current skills were adequate and that a static or declining workforce made new skills unnecessary. However, the survey found no clear evidence that non-training firms had lower rates of expansion, investment or profit. The most significant difference between the sub-samples was that non-training firms were more insulated from national and international competition.

2.3.5 Continuing Training by Industrial Sector and Firm Size

Since adult training is motivated mainly by the employer's needs to remain competitive, greater training effort might be expected in industries where price and quality competition are relatively intense and where product and process innovations are relatively frequent. Figure 2.18 shows the number of training days per employee for four grades of labour in 17 broad industrial and service sector categories.

For manual employees of all skill levels, training per employee is highest in extraction/energy, engineering (mechanical and electrical), construction, retailing and finance/business services. The incidence of training is highest in extraction/energy, minerals/chemicals, retailing, health and central government. For managerial and professional employees (excluding those in the predominantly public sector services) training per employee is highest in finance/business services, retailing, metal goods, electrical and mechanical engineering. Here the incidence of training is generally higher than for manual employees in the same industry, but the pattern between industries is similar. There is some evidence of a trade-off between incidence and average length of training between grades within an industry, but the relationship is less clear between industries. Finally, industries which train a large proportion of their workforce do not necessarily give shorter training durations per employee than those which concentrate training on a relatively few employees.

Figure 2.18: Training Provision by Grade and Industry (1987)

Sector	Unskilled man./service	Semi-skilled manual	Other non-man.	Managerial & Prof.
Extract/Energy	4 (66%)	9 (59%)	5 (68%)	7 (68%)
Minerals/chems	2 (32%)	7 (55%)	5 (45%)	6 (55%)
Mechanical Eng	3 (26%)	7 (34%)	6 (35%)	7 (43%)
Electrical Eng	2 (30%)	8 (41%)	5 (41%)	11 (47%)
Metal Goods	2 (32%)	7 (36%)	5 (39%)	9 (51%)
Cloth/Textiles	3 (22%)	4 (27%)	3 (34%)	3 (25%)
Other Processes	2 (26%)	6 (41%)	3 (33%)	6 (37%)
Construction	1 (13%)	9 (24%)	5 (35%)	4 (26%)
Transport	5 (48%)	4 (39%)	4 (39%)	3 (38%)
Wholesaling	3 (26%)	4 (27%)	6 (42%)	4 (37%)
Retailing	9 (79%)	8 (56%)	7 (53%)	8 (62%)
Finance/Business	4 (27%)	9 (49%)	7 (53%)	9 (53%)
Catering/recr	7 (50%)	8 (49%)	5 (38%)	5 (43%)
Health	2 (85%)	6 (22%)	17 (85%)	25 (79%)
Central Govt	2 (32%)	5 (58%)	10 (66%)	7 (55%)
Local Govt	1 (15%)	6 (36%)	7 (66%)	4 (44%)
Education	1 (46%)	2 (44%)	3 (23%)	17 (89%)

Source: IFF (1990) Figure AV.5.

It is difficult to relate these results to changes in skill needs within industries. In engineering and construction, higher levels of manual training are likely to show the existence of a compulsory training levy in these industries in the year of study. In engineering and finance/business services, higher levels of non-manual and

managerial/professional training reflect the existence of well-established professional qualifications (for example, engineering, accountancy, law and banking) which are pursued relatively independently of changing skill needs.

The levels of non-manual training in health, education and central government shown in Figure 2.18 are considerably higher than for private industry and services confirming that the inclusion of the public sector in the study raises the average level of training for the whole economy. Although the figure averages out training days over all employees (and not just trainees) in the grade, it again confirms the concentration of training on skilled or semi-skilled employees and on managers and professionals.

In the UK it has often been suggested that small firms 'poach' trained employees from larger ones and are unable or unwilling to train their own employees. Figure 2.19 shows the level of training per employee (all grades) for six categories of firm size (measured by employment).

Figure 2.19: Training of Employees by Size of Firm (1987)

	10 - 49	50 - 499	500 - 999	1000 - 4999	5000 - 9999	10000+
Days / employee	4	4	4	7	6	7
Days / trainee	11	10	10	12	13	11
Proportion (%)	37	35	37	55	45	58

Source: IFF (199O) Figure A.7.

Firms with over 1000 employees appear to train a greater proportion of their workforces and for longer periods than those below this size threshold. However, there is no systematic relationship between size of firm and the amount of training given to trainees. The survey provides no evidence that firms with fewer than 50 employees make less training effort than those with between 50 and 1000 employees. The smallest firms (those with less than 10 employees) were not included in the study.

2.4 Is Training Undersupplied?

Because formal training produces transferable qualifications whose market value does not contain an allowance for the training cost involved, a system of voluntary employer-funded training (as largely exists in the UK) is likely to lead to under provision. Trainees whose productivity rises must receive matching wage increases immediately if they are to be dissuaded from moving to other firms. Therefore, an employer cannot recoup the training cost by holding the post-training wage below the new value of output. There is an incentive to 'free-ride- by recruiting labour trained at another firm's expense, unless the skills are so specialised that they cannot be found in the labour market and are

unlikely to leave the firm that trains them. Employers who do train therefore have an incentive to make it non-transferable.

Two solutions to this apparent under provision have been attempted in the UK. The first was a system of compulsory training levies through which non-training firms compensated those giving training to recognised standards. This system only covered larger firms in a limited range of manufacturing industries and was reduced to a voluntary system in the mid-1980s.

The second approach is a general government subsidy to employers who give training. This is achieved in part through the allocation of YTS subsidies to existing apprenticeships but as already shown, most government training expenditure has gone to non-employer based youth trainees or to unemployed people whom the firm would not otherwise have taken on. There is no general subsidy to train and no general penalty for firms choosing not to train.

Despite this, it is possible that training in the UK is constrained on the 'demand' rather than the 'supply' side. The requirements of firms for formal skills may be sufficiently low that the returns to training, even if fully appropriated, are too low to justify the costs. Not all employees who receive training obtain promotion or higher income with their new skills and not all unemployed people who undertake training receive a job at the end. Four factors may have led to a low formal skills requirement in the UK, coupled with a relatively low value attached to those skills obtained, summarised as follows:

- The substitution of a small number of higher skilled (graduate and technical) workers for a large number of intermediately skilled (craft) workers (ie. a greater 'productivity' from formal skills).

- Specialisation in products and processes where informally acquired skills continue to be adequate. These might include both traditional industries and newer industries where technological advances have deskilled the work available (eg. in the programming of some CNC machine tools).

- Persistently low aggregate demand with excess capacity and labour, all of which suppresses skill shortages by keeping requirements within the restricted supply.

- Employers' historical experience of deploying and promoting informally trained labour so that uncertified workers are capable of filling highly skilled posts. Many UK managers still regard paper qualifications as an inadequate substitute for knowledge of their employees' demonstrated capabilities.

The last three points above may represent self-sustaining processes. Unemployment arises partly through the efforts to control inflation, which may be due to wage increases given by employers competing for scarce skills. Employers accustomed to dealing with informally trained workers may feel it unnecessary to give more of them formal training and firms may select products and process technologies which minimise formal skill requirements. Furthermore, capital investment which greatly exceeds investment in training may be directed at raising productivity within the current skills supply constraints.

Three indicators help to assess whether the UK has an undersupply of formal skills or not. One is the level of structural unemployment attributable to unemployed people lacking the skills required for the jobs available. This 'skills mismatch' can be proxied by the number of hard-to-fill vacancies at jobcentres attributed to skill shortages. Employment Department surveys in 1984 and 1985 found that about one third of long duration vacancies were explained in this way. However, this method fails to include those vacancies that are not notified to the jobcentre network (Hart 1990).

An alternative proxy is the number of firms reporting skill shortages as a constraint on output. Reports of shortages are highly cyclical, reaching peaks in the boom years of 1973-74, 1978-79 and 1988-89. A fairly recent large-scale survey of the problem, the Employment Department's 'Skill Needs in Britain' conducted in 1989-90, caught the economy as close to full employment than it had been for some time. The survey found that 46 per cent of establishments had experienced skill shortages in the past year. Of these, 42 per cent had had their output or development plans disrupted and a further 43 per cent had experienced higher running or recruitment costs. About 40 per cent of establishments, therefore, had been materially affected by skill shortages. Around 17 per cent of respondents also identified a gap between their existing skills and those needed to pursue plans for technological change.

Experience of actual skill shortages was highest in engineering (60 per cent) and lowest in finance and business services (32 per cent). It is interesting that both these industries are relatively generous with their training (as indicated in Figure 2.18, although both tend to make extensive provision to a minority of their workforces). While training activity may prevent recruitment problems, it can also be a symptom of problems which have already occurred.1

Both these indicators suggest a considerable incidence of unmet skill needs when the economy is not in deep recession. However, neither can distinguish skills mismatch from geographical mismatch, the right skills being available but in the wrong places (Hart 1990).

A second indicator is the rate of unemployment among holders of vocational and professional qualifications, both in absolute terms and relative to the rate for those without them. A relative scarcity of formal skills should produce labour market advantages for those who have them. The most reliable statistics concern holders of university-level academic qualifications (degrees and diplomas) who are the subject of a regular follow-up survey, the most recent covering 1980 graduates (Clarke et al, 1988). Six years on, 2.1 per cent of the graduate cohort was unemployed compared with 12 per cent of the total working population. Academic qualifications not only greatly improved the prospects of being in work, but remained in high demand despite an extremely depressed general labour market.

Looking in more detail at subject areas, unemployment was highest for those qualified in language and literature (3.3 per cent) and health (2.2 per cent) and lowest in engineering and technology (0.9 per cent) and education (1.3 per cent). Therefore, among graduates employed mainly in the private sector, those with more vocational degrees appeared to be in higher demand. Unemployment rates for all graduates were greatly below average.

Evidence on unemployment rates for vocational skills is harder to obtain. Two recent sample surveys of the long-term unemployed in urban labour markets (Meadows et al, 1988 and Cooper 1989) examined the highest qualifications held by unemployed people and is reported in Figure 2.20.

Figure 2.20: Highest Qualifications Amongst the Unemployed
(Percentage of all unemployed)

Qualification Level	London 1988	West Midlands 1989
Degree/diploma	9	2
A Level/Higher	12	5
O Level/Ordinary/CSE 1	25	15
CSEs 2-5	10	17
Apprenticeship	4	3
Clerical/commercial	5	4
City & Guilds Cert	6	7
ONC/OND	0	1
HNC/HND	1	*
BTEC Cert/Diploma	2	1
No Qualifications	46	63

* Denotes less than 1 per cent.

Source: ***London: Meadows et al, 1988 Table B9.***
West Midlands: Cooper, 1989 Table B7.

The surveys used in Figure 2.20, unlike those for graduates, were taken close to the peak of an economic boom period. At the time, unemployment rates were around 6 per cent in the West Midlands and 7 per cent in Greater London. Both show a considerable number of qualified people among the jobless, even though unemployment hits the least qualified the hardest and the longest. Those with an academic highest qualification appear more prone to unemployment than those with some vocational training, even if this is at what is usually regarded as a lower level of qualification.

The main finding of both surveys was that structural unemployment due to a skills mismatch is comparatively small; in London, '..what is surprising is the extent to which the characteristics of jobs and people co-incide' (Meadows et al, paragraph 35). What prevented skills being matched to jobs was employer reluctance to consider unemployed applicants, sometimes reinforced by a transport problem producing geographical mismatch. Part of the value of 'training' for the unemployed arises from raising the 'employability' of their existing skills rather than giving them new ones. Some vocational skills are apparently wasted through employers' lack of belief that they will be exercised effectively.

A third, more subjective, indicator is the proportion of employees reporting underutilisation of skills or an unsatisfied need for additional training. Figure 2.21 shows the proportions of employed adults who regarded their work as exercising the skills already held and who had felt that further training was necessary in the previous three years but had not received any.

Figure 2.21: Unexercised Skills and Unmet Training Needs
(1987, percentages of each age group)

A: Proportion reporting 'very good' opportunity to use current skills in current job.
B: Proportion who would have liked training but did not receive

Age Group	Men		Women	
	A	B	A	B
19 - 24	39	41	33	39
25 - 34	58		39	
35 - 44	55		34	
45 - 54	55	42	44	39
55 - 59	36		50	
Total	52	42	37	44

Source: PSI (1990) Table 7.2c, 7.4a.

In general, satisfaction increases with age and this is partly because employees get promoted to more responsible jobs as they grow older and partly because older workers tend to have fewer certified skills (older workers may also prefer to trade-off the challenge of the job against ease and security). The lower proportion of women satisfied with their situation in all age groups except the highest, reflects the tendency of qualified women to drop down the organisational ladder following a career break (usually to bring up a family). There may also be some continuing sex discrimination among employers in the allocation of responsibilities.

Overall just over half of male and one third of female employees believed their skills (either formal or informal) to be adequately exercised in their jobs. While there may be a tendency for respondents to overestimate their capabilities, this suggests that a considerable proportion of the vocational skills held in the UK is not currently utilised. It remains possible that the process of acquiring those skills has given employees other, more general qualities which raise productivity and are useful for employers. However, a relative undersupply of skills in the UK should lead to more intensive use of those that exist, but neither this nor the previous data referred to provides much evidence of this.

The proportion that wanted and did not receive vocational training is roughly constant across age and sex divisions at just over 40 per cent. The reasons given by respondents for not receiving the training were mainly financial, neither they nor the employer were willing or able to pay, although women at all ages tended to also cite family commitments.

Approximately 10 per cent of the total sample also stated that they could not find a suitable course and a further 5 per cent that they had a lack of support from their employer.

This indicates a substantial unmet training demand by employees, although the result is probably exaggerated since the desire to receive further training does not necessarily mean that it was needed on the job and a number of reasons given by respondents for not undertaking the training (such as 'changed mind' or 'not enough time') might be taken to signal a lack of commitment. This and a number of other findings in the survey challenge a view sometimes put forward in the UK that employers are reluctant to offer training because most employees are reluctant to receive it.

The wage differential to certified skill might provide a market measure of scarcity, with higher skills commanding a larger premium the lower the relative supply. If Britain had, for example, fewer skilled craft workers than (West) Germany, its differential of skilled over unskilled wages would be larger. In practice British wage and salary differentials are low relative to its main EC competitors (Jones 1985, Prais & Wagner 1988). However, it cannot be inferred that its skills supply is relatively better. Negotiated differentials are relatively insulated from market forces, being subject to tradition and relative bargaining strength. The power of general unions in the early post-war period significantly narrowed the differential of skilled over unskilled workers and there are only limited signs of a recovery more recently (although companies can use promotions, performance related pay and bonuses to increase the wage for skills in short supply).

2.5 Does Continuing Training Compensate for the Relative Lack of Initial Training?

The UK's output of new vocational qualifications (assessed earlier) remains low relative to its most immediate competitors in Europe. Although employers concentrate their training provision on new employees recruited from schools, a relatively small proportion is trained and relatively few of these emerge with formal vocational qualifications. Because apprenticeships were generally time-served until the early 1970s, largely giving way in the 1980s to Youth Training places which often were completed without formal testing and certification, the stock of vocational qualifications in the UK is also relatively small.

It is possible, given the evidence examined in this section, that UK employers carry out more adult training than they would if there was a more extensive or universal system of formal youth training. This might also produce a relatively higher level of continuing training than in EC countries with stronger initial training programmes, or at least a smaller gap than exists over initial training. However, UK continuing training is concentrated on those who already have the formal skills and job grades that generally follow from initial training. Firms do not usually engage in remedial training for adult employees. Instead, given the considerable costs of adult training which fall largely on the employer, they concentrate on further raising the skills of those already holding professional or technical certification. Referring back to Figure 2.7, the 14 per cent of young people who receive no initial training tend to become, along with those who obtain no formal skills from it, the 35 per cent of new recruits and the 52 per cent of established employees who receive no further vocational training.

One possible reason why both initial and continuing qualifications output are relatively low is the inadequate preparation for vocational training received in schools. Pupils follow a common academic (GCSE) curriculum to age 16 and most who stay on to age 18 study for a further academic qualification (A levels) which is the main requirement for university entrance. As already noted, the TVEI serves only to introduce work awareness into the academic curriculum. Vocational courses cannot be followed below age 16 and relatively few are taken in the Sixth Form where they tend to supplement rather than replace A level study.

There is an increasing belief that compared with the rest of the EC, the GCSE curriculum is deficient in promoting the general abilities onto which employers need to graft specific technical skills. In particular, pupils are able at 14 to make a subject choice into arts or science and the average standards reached at 16 in vocationally relevant subjects may be lower than those of comparable pupils in other countries (Prais & Beadle 1991).

It is likely that UK expenditure on training also falls short of that achieved in comparable EC countries. However, the gap is unlikely to be as large as that observed with the stock and flow of vocational qualifications. A substantial amount of UK training does not result in testing leading to formal qualifications. An important reason for this may lie in the desire of employers to make training firm-specific and so prevent a leakage of trained labour to other firms. This is also consistent with the fact that approximately half of all training in given on-the-job and the relatively high expenditure on external trainers brought into the firms as against trainees sent outside to gain practical experience.

If this is the case, the UK's under provision of formal qualifications exaggerates any under provision of skills. However, to the extent that off-the-job training is needed to develop general abilities and formal testing to provide transferable skills, both employers and employees may be losing out through the informality and over-specificity of the training currently taking place.

2.6 UK Labour Market and Industrial Relations Trends

The total UK workforce (March 1991) is around 28.5 million of which some 24.8 million are employees, 3.3 million self employed and 0.4 million on work-related government training programmes. The size of the workforce has increased from less than 27 million in 1980 as a result of demographic factors (principally the 1960s baby boom now entering the labour market) and a substantial rise in female activity rates.

Official figures on unemployment (those claiming benefit) showed that around 2.1 million were without work in 1991 giving a rate of 7.3 per cent. More than one quarter of the unemployed had been out of work for a year or more. The numbers claiming benefit has been increasing since March 1990 when the seasonally-adjusted rate was 5.6 per cent. However, the number and proportion of long-term unemployed has actually fallen over this period, mainly due to the expansion of the Employment Training programme which effectively removes a participant from the unemployment count.

Part-time working made up around one quarter of the workforce in 1991 compared to 21 per cent ten years earlier. The proportion of self employed has also risen over this period. Both trends reflect the industrial restructuring that has gone on, with job shedding,

contracting out by firms and the creation of flexible working practices. Although many of the new part-time jobs are held by women, it is not clear whether this reflects their preference for this type of working or the unavailability of full-time work. The proportion of temporary employees (excluding those on training schemes) has remained virtually unchanged at around 5.5 per cent (Casey 1987).

The employed workforce consisted of 11.7 million males and 10.6 million females whereas the official unemployment figures showed there to be 1.5 million males and only 0.5 million females.

However, female unemployment is likely to be understated in the figures for claimants since entitlement to benefit conditions mean that many women who would like to work are not eligible for benefits (especially married women because of their partner's earnings) and so cannot register. There has been an overall decline in the labour force participation of men and a corresponding increase for women. Male employment is predominantly full-time (92 per cent of all male jobs) and weighted towards manufacturing industry (30 per cent). Female employment is more extensively part-time (44 per cent) and mostly in the service sector.

A fall in birthrates after 1966 means that inflows to the labour market are declining in common with other EC countries. The number of people aged 16-19 will fall from its 1983 peak of 3.7 million to just 2.5 million in 1993 before rising slightly to 2.8 million in the late 1990s. The number of under 25s in the workforce will similarly fall by 1.2 million between 1987 and 1995. Increased staying-on rates in further and higher education will further reduce the supply of youth entrants, forcing employers to redirect recruitment and training towards other groups such as older male workers and returning women.

The sectoral distribution of employment in 1991 showed 18 per cent in manufacturing, 10 per cent in agriculture, forestry and fishing, 25 per cent in public administration and services and 47 per cent in marketed services (including the state-controlled postal service and British Rail). Manufacturing employment fell from 7.1 million in 1980 to just over 5 million in 1991. Agricultural and public service employment also declined leaving the economy largely dependent on private marketed services for its employment growth.

Current projections suggest a net creation of some 1.7 million jobs between 1987 and 1995 of which 0.5 million will come from self employment. Over 60 per cent will be part-time and most will be filled by women. Service and construction employment will rise by 2 million, but a further 0.3 million will be lost from manufacturing. The main areas of job creation will be in business and miscellaneous services, health and education as well as distribution, hotels and catering. More than half the jobs will be for graduates or professionals and the volume of unskilled work will continue to decline (Institute for Employment Research, 1987).

Industrial Relations in the UK

The most significant recent trend in industrial relations in the UK has been the decline in trade union membership (concentrated among the manufacturing based craft and general unions) and in union recognition by employers. Other significant changes include a fall in the incidence and effectiveness of strike activity, the decentralisation of wage bargaining

with the virtual absence of government intervention and the decline of government-sponsored tripartite arrangements for indicative planning in key sectors.

Trade union membership fell from 13.2 million in 1979 to 10.3 million in 1987, the loss occurring mainly in the private sector where membership fell from 7 million to under 5 million. The number of employees covered by closed shop agreements (where membership is compulsory and bargaining power strongest as a result) fell from 5.2 million to 3 million and the number of nonunion workplaces rose from 9.1 to 10.8 million (Metcalf 1990). Much of this membership loss can be linked to the decline in manufacturing employment over the same period and especially since 1979.

New areas of employment growth (mainly in the service sector) are generally more difficult to unionise with small, dispersed workplaces and a higher proportion of part-time, temporary and casual staff. But there is also a concerted effort to limit the activities of the unions which were widely perceived to have 'priced their members out of jobs' and reduced productivity growth by opposing reorganisation and new technology.

Most employers have ceased to recognise unions or to permit recruitment to them. Some other firms (notably new Japanese and US owned plants new to the UK) recognise a single union with which they often conclude a 'no-strike' deal. The legal powers and immunities of trade unions have been significantly reduced since 1980 with employers now able to dismiss striking workers and to seek compensation through the sequestration of union funds.

Industrial action has become more difficult to organise or sustain. In the year to July 1991, an estimated 0.7 million working days were lost due to stoppages of work, compared to 29.5 million in 1979 and an annual average of 6.3 million days lost during the 1980s (Employment Gazette, October 1991). The average duration of stoppages has also fallen and an increasing number of stoppages are unofficial (ie, without the sanction of the trade unions). The industrial relations system appears to have become less adversarial with trade unions becoming providers of member services (eg. financial and legal advice, social facilities, etc) and seeking to raise wages through cooperation with management to raise productivity.

Where trade unions still bargain on behalf of employees they do so increasingly at plant rather than industry level. Although trade unions continue to organise across whole industries, the proportion of the workforce covered by multi-employer agreements fell from 60 per cent in 1978 to 54 per cent in 1985 (Department of Employment 1988). National agreements between unions groups and employer associations are increasingly open to regional or establishment level modification. This has allowed greater linkages to be established between pay and plant productivity and to local labour market conditions. The power of the Wages Councils to set minimum wages for workers in so-called 'vulnerable' industries has also been reduced (and is scheduled to disappear completely allowing greater pay flexibility among the unskilled).

Even during the first phase of legislation aimed at curbing the power of the trade unions, there was a tendency for UK nominal wages to rise at a faster rate than labour productivity. At some times this was absorbed by a redistribution from profits to wages (which may have depressed industrial investments) and by improvements in the terms of trade. At others, it may have contributed to Britain's relatively high rates of price inflation.

These arguments are far from straightforward, however, and it may be the case that wage inflation is a response to price inflation rather than a cause of it. Nevertheless, industrial relations policy since the late 1960s has concentrated on attempting to control the growth of nominal incomes.

Between 1960 and 1979, the favoured approach to this problem was through incomes policy which set guidelines for maximum annual pay increases. Except for a statutory policy in 1972-74, the approach was voluntary with government making macroeconomic policy commitments (eg. lower inflation and unemployment, higher social spending) in return for trade union moderation of wage claims. There is very little evidence to suggest that incomes policy achieved a sustained reduction in wage or price inflation.

After 1979, the government explicitly abandoned incomes policy in favour of a programme of anti-union legislation. Although this reduced the (measured) level of industrial disruption, it appears to have had little effect on wage inflation which only moderated in the late 1980s after union power and coverage had stabilised. Faster productivity growth may have encouraged higher rates of wage growth after 1982, but there seems also to have been a demand-led wage inflation as employers competed for undersupplied skills in 'sunrise' industries and regions.

Britain's experiment with tripartism centred on the formation in 1962 of the National Economic Development Council (NEDC) and of Economic Development Councils (EDCs or 'little Neddies) covering the main branches of private industry. These brought together representatives of employers' associations, trade unions and civil servants to share information, discuss prospects and sponsor industry-wide initiatives (eg. for vocational training and diffusion of new technology). The NEDC was intended to promote restructuring for faster growth and was modelled on the French *'Commissariat General du Plan'* (Shanks 1967). From 196467, indicative planning was attempted for the economy as a whole through the Department of Economic Affairs, though both this and NEDC are no longer operating (NEDC was finally wound up in 1992).

SECTION 2 :

CASE STUDIES

3.1 INTRODUCTION

The principal aim of this part of the overall study is to more fully understand the extent and nature of continuing vocational training in firms. In particular the study attempts to identify the place of firms in producing qualified labour by means of continuing education and training and through the organisation of labour.

This report is based on detailed discussions and observations at three case study firms. The ultimate focus in each was on a single establishment and within each a single work unit, all set in the context of overall corporate policy on training and human resource development generally.

3.1.1 Selection of Case Studies

The criteria for the selection of case study firms was set out by the study co-ordinators. Fundamentally the firms chosen would have been through substantial organisational change over the past few years and this process should have been largely completed.

Organisational change was widely interpreted in this context and included such aspects as technological change and more subtle alterations to utilisation of staff or their organisation at work.

The three case study firms were selected on the basis of the following three categories:

- large plant of national (manufacturing) company (A)
- branch of service sector company (financial services) (B)
- plant of European-based multinational ©

This was expected to provide a useful range of experiences and the opportunity to make comparisons between member states.

Obviously the experience of just three firms seriously limits the amount of conclusions that can be made and applied to other firms. Because of this, the case studies would therefore be detailed and largely qualitative, with greater emphasis on the processes of change and the outcomes than on any statistical evidence of change.

In order to achieve this degree of information, a whole series of discussions was arranged in each case study firm. These involved not just managers but also non-managerial employees and supervisory staff in the work units. In most cases the interviews with employees in the work units involved group discussions. Time was also spent observing the work process and examining back-up secondary source material on the case study companies.

On the basis of the above criteria, a short list of ten firms was compiled from existing knowledge. Each was approached initially be letter explaining the objectives of the study and outlining the degree of co-operation needed. This was followed up with a personal meeting, normally with a senior manager at corporate level which provided the opportunity to expand on the needs for a successful case study and to assess whether the firm was suitable.

From this process the three case studies were selected. Following this, further discussions with the firm were necessary to identify which part to focus on and ultimately which establishment/work unit to follow up.

3.1.2 Structure of Section

The following three parts of this section cover separately the three case studies hereafter referred to as A, B and C. The firms did give permission for their corporate identities to be retained and each has had the opportunity to comment on their case study. However, in the interests of consistency with the other national case studies, the decision was taken to keep the names of the firms anonymous.

Each section describes the processes of change and how employment and training was affected. There is discussion of the role and importance of training and a short synopsis of the main points emerging.

Section 3.5 concentrates on bringing the three case study findings together and making some observations on the similarities and differences displayed.

3.2 CASE STUDY A

3.2.1 General Introduction

The firm is an important motor vehicle manufacturer in Britain with an output of cars and commercial vehicles. The company produces vehicles for sale on the home market and increasingly for export. The company recognises the highly competitive nature of its industry, with Japanese manufacturers providing the greatest threat especially with the trend towards European (and particularly the UK) plants. This has to some extent explained the firm's recent initiative towards 'leaner' production along the lines of the Japanese car makers.

Change over one year (Figure 3.1) indicates a decline in production of around 14 per cent, caused for the most part by the significant fall off in the domestic demand for new cars during the current economic recession. In sharp contrast to the depressed home market, the number of vehicles exported rose by 13 per cent and export revenue by a massive 52 per cent.

In terms of the wider economic impact of the company, their own figures estimate that through taking account of expenditures such as: purchase of materials, goods and services, export earnings, VAT payments, car tax and income tax paid by employees, the likely figure is around £5.1 billion.

Figure 3.1: Case Study A: Trends 1990/91

	% Change
Vehicle production (No)	-13,7
Exports of vehicles (No)	13,0
Vehicle sales (No)	-6,8
Sales revenue (£s million)	-1,1
Export Revenue (£s million)	51,7

Source: Case Study A

Whilst much of this contribution accrues nationally, there is certainly a strong localised element within the UK which comes through from consideration of the location of plants and from examination of the group's employment figures discussed below.

3.2.2 Group Employment

In 1991 the total employment for the Group averaged 35,000 largely split between three principal manufacturing locations. In addition there are smaller operations such as Group Head Office and vehicle design facilities mostly in the Midlands. Employment has

continued to fall with a reduction of 4,000 or so throughout the group over the 12 months 1990-91.

The indirect employment effects of such a large operation are considerably greater than the total direct workforce. The firm's own figures suggest that when those supplier firms are taken into account, there are approximately three further jobs sustained by each one directly employed by the group. On this reckoning, indirect employment approaches 105,000. Add to this the 27,000 employees in the dealership network and it means an estimated 132,000 indirect jobs supported by Case Study A, the vast majority in the UK.

3.2.3 Ownership

The company has had a turbulent history throughout the postwar period. Since 1988, however, there has been more stability in ownership (though not without controversy) and the firm is currently part of a larger international engineering organisation. However, there is little evidence to show that the acquisition by the parent organisation has affected the operation of the firm to any significant degree. Of more relevance here is the long-standing collaborative arrangement with a Japanese manufacturer.

Some of Case Study A's success in sales can be attributed to the benefits of this collaboration with joint car design and more subtle influences such as the adoption of the staff uniform and employee fact-finding visits to plants abroad. Japanese production styles have, of course-, influenced virtually every car maker and are augmented by attention to such factors as TQM (Total Quality Management) and skills flexibility amongst many.

3.2.4 Organisational Structure

In 1990 there was a change in organisational focus from 'functional' to 'product' determined structures. Fundamental to this change was the adoption of stronger team working and the involvement of all staff in the process of production. Group head office has recently adopted the stance of a 'holding company' with much autonomy devolved to six business units as follows:

- Small & Medium Cars
- Large Cars
- 4x4 Vehicles
- Power Train (1)
- Power Train (2)
- Body & Pressings

Each of the business units has its own Managing Director and Director of Personnel, with appropriate hierarchical staff structures beneath. Each is a cost and profit centre, even though for the most part there is a high degree of interdependence between the business units. For example, the main customer for the outputs of the Power Train business units are the two units of Small & Medium Cars and Large Cars. However, Small & Medium cars do buy in engines from other suppliers (eg, Peugeot diesel engines).

Business units may be single site or spread between a number of locations. The Power train business unit, the one selected as the focus of this case study, is single site with operations based in the Midlands. However, the site is not wholly Power train; sharing the location is the Small & Medium Cars business unit.

3.2.5 Personnel and Training Functions

Whilst there still is a personnel function at group headquarters level, its role is essentially strategic, establishing the ground rules for human resource development in its wider context. However, a feature of group activity in the recent period has been its interest in human resource development as the key ingredient in the company's future success.

This view permeates down from the group chairman and at this level there is a great deal of involvement in setting the right conditions for human resource development to happen. Recently the chairman set out his views, encapsulated by the statement that business success can only come about through 'the capability, competence and contribution of all employees'. The stress on the word 'all' is important. The company self-admits that hitherto there were 25,000 employees who had 'jobs' in the company and another 10,000 who had 'careers'; the two groups equate with the hourly paid and staff. The former had little or no access to career development and training was a highly focused, job specific affair dictated through the hierarchical structure.

Whilst 1987 marks a turning point in the company thinking on staff development (it was at that time that the firm introduced its Total Quality Improvement initiative), a fundamental rethinking of the staff development process started two years ago co-inciding with the move to a product-led business structure. The intention was to develop a 'learning culture' where all employees are encouraged to perceive learning as a life-long activity. It required a fundamental shift in the thinking of most employees and a major challenge for those managers set the task of guiding the workforce along this path. Objectives were set including the demolition of some 2000 job definitions, to be replaced by 30 activities based on competence-determined progression.

Here the development of the National Vocational Qualifications (NVQ) initiative was timely and no doubt helped shape the thinking at the firm. The official company line is that NVQs have helped release the 'latent potential' in individuals by motivating and rewarding through certification rather than through conventional qualifications routes. The company would like to think that their success with NVQs as part of this larger cultural change in staff development, has taken the emphasis off traditional career patterns based on entry and post-entry qualifications such as apprenticeships and degrees. However, this may be so, but another important factor in helping this process has been the reorganisation of work and the pursuit of a more flexible workforce (more fully discussed below).

One obvious sign of this change in emphasis within the group was the setting up in 1990 of what is best described as a 'company within a company' and its mission is contained within the following statement:

"(the initiative) will be the market leader in providing a continuous learning and development environment for all employees. The environment will motivate and enable

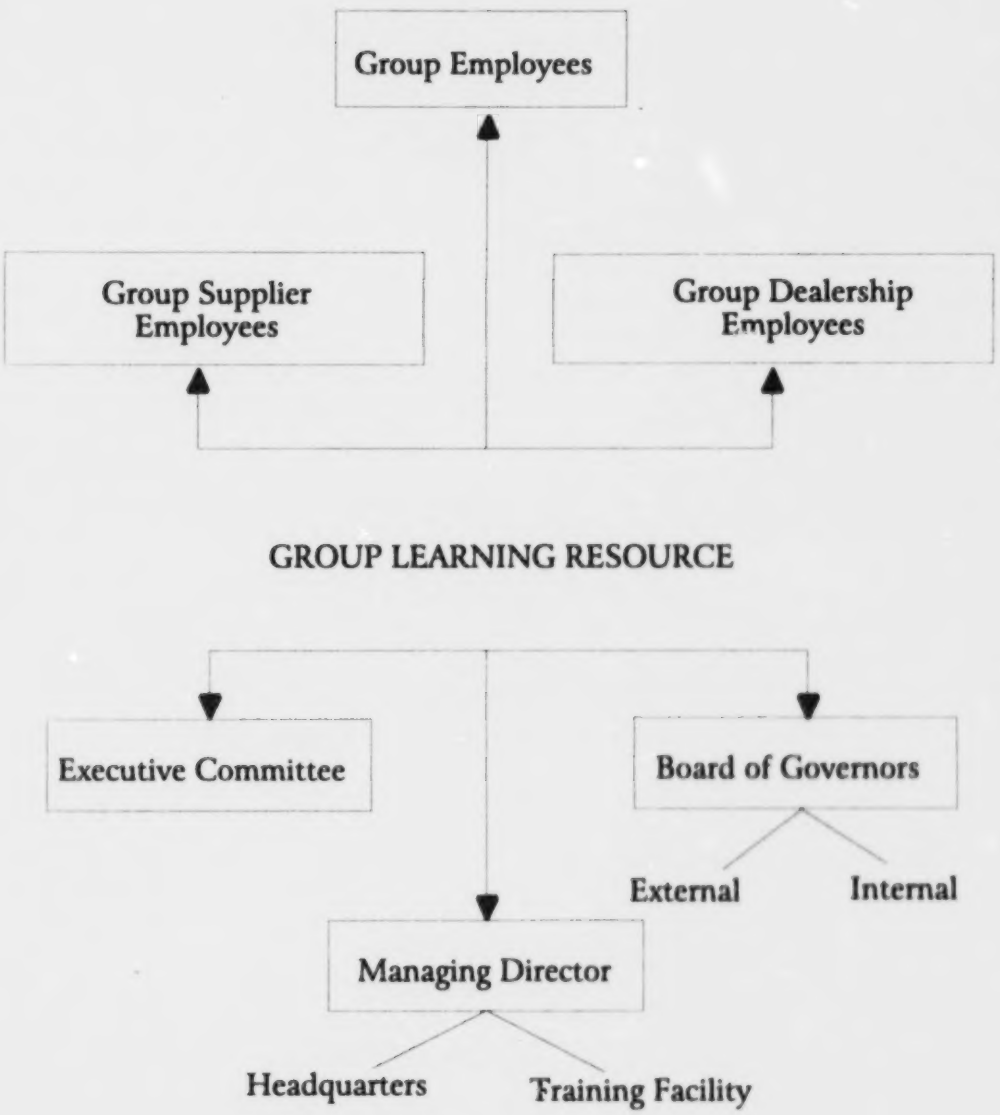
individuals to make the most of opportunities provided for individual achievement, as well as support the continued growth of the (company name) Group, its suppliers and its franchise dealer network."

It is a comparatively small operation with 50 permanent staff led by the managing director reporting directly to the Group board. However, its activities are overseen by a board of governors comprising Group executives and seven external members (principally educationalists). It offers a service to the business units and is also involved with the development of learning materials. Figure 3.2 summarises this organisational structure.

The kinds of learning materials produced by this in-house training resource are in the main applicable across the group. These have ranged from diaries containing information on learning, to open learning material (video, audio and written). Two particular products are worth highlighting in the context of this study.

The first is a user-friendly package called 'Personal Learning Pays'. This consists of an illustrated book of over 90 pages taking the reader (it is aimed at all staff) through the reasons why personal learning is worthwhile. It is backed up by an audio tape and the whole package is of a style that would make it attractive to the employee thus encouraging its use. The focus is very much on the value of general self development through encouraging such activities as learning a new sport as well as learning to use a computer, for example.

Figure 3.2: Organisation of Learning Resource



The second product which has more potential impact is the 'Personal Development File' (PDF). This was introduced in 1991 and the intention was to provide all employees with the opportunity of monitoring their own development. The decision was made that the PDFs should be handed over on a request basis which meant that employees needed to be informed of their availability and intent. This was largely left to a trickle down approach where production cell managers (more fully described below) would inform their staff through the regular team meetings. Posters explaining the package were also positioned in prominent workplace sites.

Personal Development Files

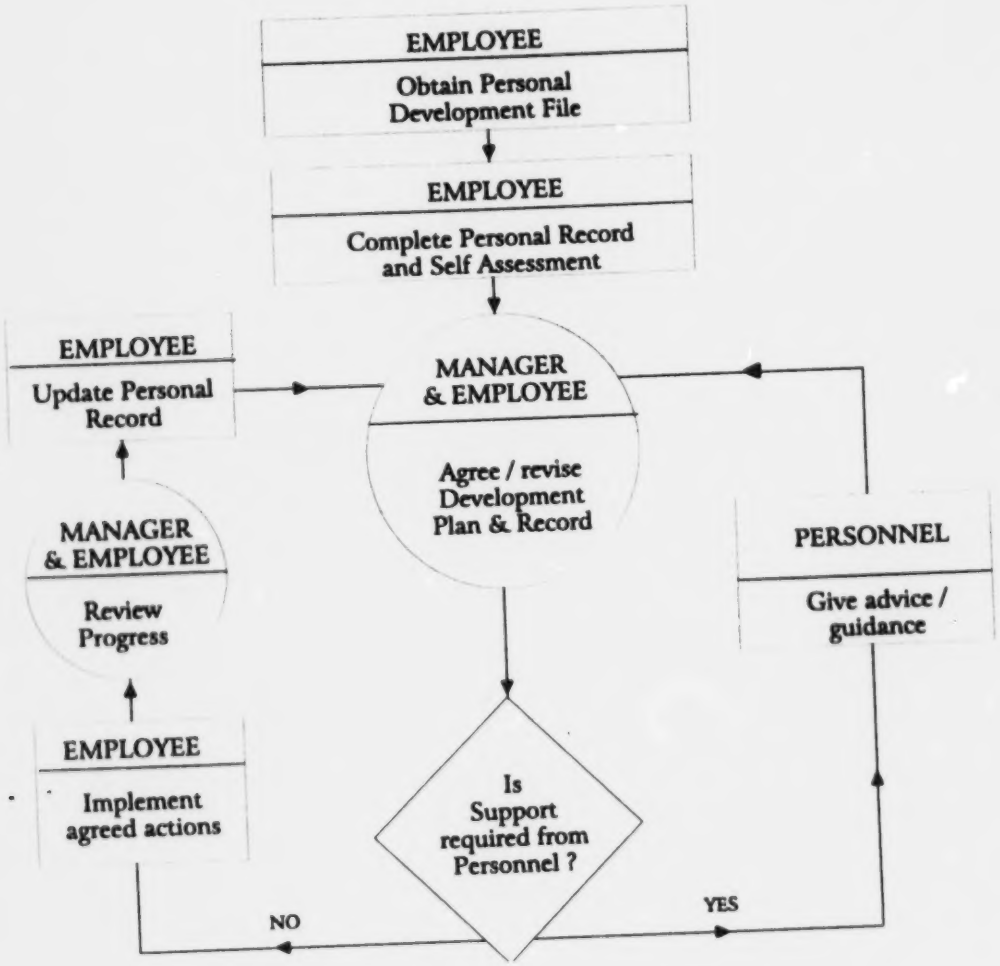
Given the potential importance of the PDFs in helping achieve the company's objectives of giving employees ownership of their own development, it is important to provide a little more detail of their content and format.

The PDFs are packaged in a plastic box-type folder and within there are explanatory notes for the employee together with a series of dividers for inserting material as it is accumulated. The sections cover the following:

- Personal Development Plan: contains guidance notes and is in three parts as follows:
  - Personal Record (work history, skills and abilities, etc)
  - Self-assessment (covers such questions as: what parts of the job do you enjoy and why? What skills and abilities do you have which you do not use in your job? What are your key job skills? What additional education, training or experience do you think you need?
  - Development Plan (sketches out what the employee plans to do, with timing and space for monitoring progress)
- Local Workplace Information: space for miscellaneous information about the work area (eg, organisation charts, plant maps, etc)
- Certificates of Achievement: for holding records and certificates issued by external awarding bodies.
- Certificates of Achievement: for holding records and certificates issued internally.
- Personal Records: space for anything else such as long service certificates, etc.

These sections are preceded by brief notes outlining the development process. This includes a flow diagram (see Figure 3.3) showing the process.

Figure 3.3: The Development Process



Support to the employee comes from the line manager. For an operative this is normally the cell manager and not the immediate team leader. The manager's role with the PDFs is to answer questions, try and respond to requests for training or other forms of development and to generally act as filter for related enquiries. It is important to note that employees can raise issues relating to their PDFs at any time rather than waiting to any formal appraisal meeting. In any case, it is only recently that the principle of regular appraisals have been extended to all employees.

In their first year of operation approximately 5,000 employees out of a total workforce of 35,000 had taken up the offer of their own PDF. However, there has been no assessment of their use or usefulness for individual employees.

3.2.6 Other Company-wide Training Initiatives

Across the group as a whole there are a number of other training initiatives to mention.

The *(Company) Employee Assisted Learning Scheme* has been developed by the training resource and is open to all employees. It offers the sum of £100 each per year for personal development, the rules of which are kept purposefully vague to allow a wide range of activities. Some staff have chosen non work-related courses, for example, with the money covering night school fees. Others have chosen to pursue NVQs, especially in skills semi-relevant to their jobs such as vehicle maintenance and auto electrics (reaching NVQ Level 2).

Efforts have been made to put employees through *Total Quality (TQ)* training and this has involved a number of different approaches. General TQI (Total Quality Improvement) training started in 1987 and much of the TQ training is highly focused and concentrates on achieving cost effective solutions in the production process. In the Power train Business, for example, the plan is to put all employees through a 1.5 days long off-the-job, in-house course on 'Statistical Process Analysis' given that all manufacturing processes in the group will eventually be controlled by such methods. Not all employees have a direct requirement to know about such methods, but it is seen as a valuable background to improving the quality of response to machine failures, changes in run times, etc.

The *Continuous Improvement Workshop* sometimes referred to as the 'Four Ps' (People, Pounds, Product and Process) is an innovative attempt to put every employee through a five day off-the-job programme of awareness building, providing the opportunity for employees to understand their own activities in the context of their plant and the wider company. The structure of the five days can be seen from the example in Figure 3.4. The instruction is largely handled by managers who understand the business from experience and the course rounds off with an external visit to a car dealership and a full review of the activities. Each programme accommodates around 15 associates which, given the need to maintain production, means that it will take a long time to put all employees through. The priority appears to be given to team leaders and line management at the present time.

Figure 3.4: Continuous Training Workshop

AGENDA

PEOPLE

DAY 1 MONDAY	
8.00 AM - 9.00 AM	INTRODUCTION AND COURSE OBJECTIVES
9.30 - 12.30 PM	PROBLEM SOLVING MANAGEMENT GAME TEAM BUILD
1.10 PM -4.40 PM	PROBLEM SOLVING
DAY 2 TUESDAY	
8.00 AM - 12.30 PM	PROBLEM SOLVING PERSONAL DEVELOPMENT FILE MANAGEMENT GAME

POUNDS

1.10 PM - 4.40 PM	LPS VISIT
2.15 PM	BUDGET MANAGEMENT

PRODUCT

DAY 3 WEDNESDAY	
8.00 AM - 12.30 PM	ENGINEERING - CAD-WARRANTY- BUCK ROOM
1.10 PM - 4.40 PM	PROCESS CONTROL-PROCESS ASSESSMENT

PROCESS

DAY 4 THURSDAY	
8.00 AM - 12.30 PM	TOTAL PRODUCTIVE MAINTENANCE
9.30 PM - 12.30 PM	DEVELOPMENT - FLIGHT SHED
1.10 PM - 2.30 PM	K ASSEMBLY VISIT
2.30 PM - 4.40 PM	CAR ASSEMBLY VISIT

VISIT

DAY 5 FRIDAY	
8.00 AM - 8.30 AM	COURSE REVIEW
8.30 AM - 10.30 AM	EXTERNAL VISIT - CASE A CAR DEALERSHIP
10.30 AM - 11.45 AM	COURSE REVIEW
11.45 AM - 12.45 PM	SHIFT MANAGERS RESPONSE TO COURSE REVIEW
12.45 PM - 1.00 PM	CLOSE OF COURSE

BEST COPY AVAILABLE

Within the context of trying to encourage self development, each plant has a dedicated *Employee Development Centre.* This is essentially a training room with computers and audio-visual equipment to facilitate open learning. Associates are encouraged to drop in when they are able to do so (most users do so at the end of a shift) and whilst much of the material is work related, also available are other learning materials such as on foreign languages (which is proving to be-popular).

3.2.7 A New Approach

In 1992 the firm reached a conclusion in its discussions with the trade unions on introducing a new workforce agreement covering terms and conditions of work. The new approach was put to a vote of all employees in the Spring of 1992 and was accepted by a narrow margin.

It is an attempt at cementing in place the improvements in organisation and employee utilisation made over the past few years, with the addition of some key new measures covering such factors as the abolition of clocking, the adoption of company work gear, direct credit transfer of salaries, etc. In return employees would be given single status conditions and a measure of job protection (ie, no compulsory redundancies) amongst other provisions.

Figure 3.5: The New Approach: Training

- Continuous improvement will be a requirement for everybody the company must continually improve its performance and competitive position through the elimination of waste, increased levels of efficiency and reduced levels of manpower - 'working smarter rather than harder'.

- Employees will be expected to be flexible subject to their ability to do the job, after training if necessary, and subject to safe working practices being observed. Every employee will have unrestricted access to the use of company tools and equipment necessary for them to make their contribution.

- All of us will participate in identifying training needs and giving and receiving training to improve skills/knowledge and to continuously improve the processes on which we work.

- Training/re-training and development opportunities to enhance employees' abilities beyond their present role will be available to everyone and all employees will be encouraged to develop themselves to their full potential. Everyone will be given the opportunity to spend time within manufacturing areas as part of their training and development.

Source: Case Study A (Communication to Staff)

However, there are some important sections in the agreement relating to training and these are summarised in Figure 3.5. Broadly they underline the need for employees to take the initiative in self development with a view to creating greater flexibility across the range of skills needed by the company as well as the greater use of team working.

3.2.8 Characteristics of Establishment/Work Unit

The establishment selected for this case study was the Midlands plant of the Power train Business Unit. This is the largest of the plants in the group and there has been a motor car manufacturing operation in the area for many years and under many different guises of ownership, helping to contribute to an established culture in the local labour market.

The area provides a ready source of labour supply with large housing estates surrounding the plant. Other, more specialist staff can be drawn from the large population catchment of the West Midlands around 2.5 million) without too much trouble.

The plant is not exclusively Power train, but also houses other parts of the group, principally the Small & Medium Cars Business Unit where assembly operations take place. Power train production essentially involves the manufacture of engines and transmission systems, together with many of the constituent parts that go to make them up.

In terms of training and employee development support, the Power train Business Unit at case study A has a team comprising the following staff:

- Personnel and Training Development Manager
- Training Co-ordinators/facilitators (2)
- Operator Training Team (7)

The staff have a dedicated *Employee Development Centre* on site, though it is currently housed in smaller than adequate rooms and is to be moved to larger premises in the near future. This contains audio-visual playback facilities and computing equipment. It has one person in charge who is in a position to offer advice and assistance to users.

The Business Unit also has access to the group training resource which it sees as an extension of their own facilities to be brought in as and when necessary. This delivers a consistent approach to a training and development culture within the Group and provides support for training programme development to individual areas of training.

Much of the input has come through the various products produced by the group resource such as the PDFs (explained in earlier). In Power train as a whole, over 1500 PDFs had been issued since their introduction in 1991. There was no evaluation yet on their use or their value to the employee.

3.2.9 The Work Unit

Given the complexities of the whole Power train Business Unit, it was essential to focus on a manageable part of the operation. The work unit chosen after consultations with management at the plant was a part of the production operations involved with manufacture of a particular petrol engine.

The engine is a relatively new product, introduced in 1990. It is a lightweight aluminium engine with advanced performance from its relatively compact size. It is currently fitted to various models in the firm's range, thus the main 'customer' for the Power train Business Unit is the Small & Medium Cars (located at the same site).

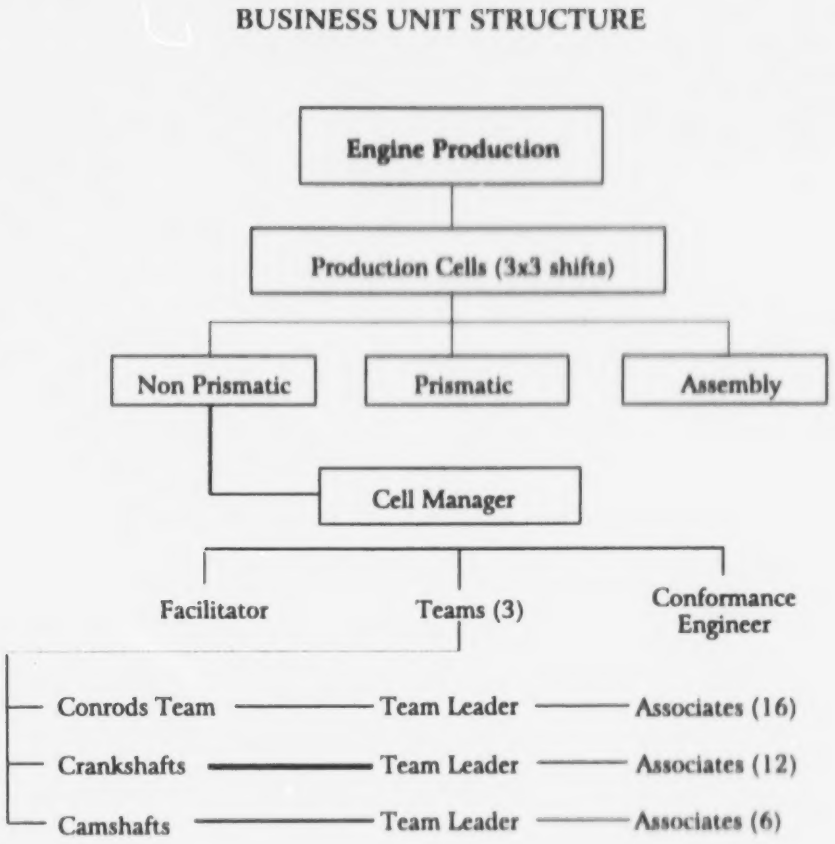
Its introduction necessitated the removal of old plant and the installation of sophisticated manufacturing equipment (essentially CNC Based). The new production process not only provided a means to meet new demands for quality and production tolerances, but also enabled the firm to redesign its whole manufacturing operation for this particular engine. Production is fully automated from the loading of materials to be machined, through their progress to finished product, all CNC operations. Naturally it also meant retraining and redeployment on a large scale.

There are currently around 900 employees working on the manufacture of the engine. It was suggested that, hitherto, engine manufacture of similar proportions would have required manning of over five times this number (around 5000 employees). In fact, in the large building housing the operation (the building extends to over half a mile in length) there is also a more traditional engine manufacturing operation taking place for production of a long-established engine principally used in one particular vehicle. The contrast between the old line and the new is remarkable in terms of the lower noise levels, degree of automation and far fewer operatives in evidence on the new line.

Traditional reporting structures would have involved a foreman looking after 30 hourly paid employees. The foreman would in turn be responsible to a senior foreman who would be overseen by a superintendent. This person would then report to the line manager.

The engine manufacturing operation is divided into three *Production Cells* each comprising an average of five teams. Each cell represents a relatively self-contained part of the production process. For this case study it was suggested that the focus should be the 'non prismatic' cell. Put simply, this is that part of the production process machining the parts that go round in the engine. There are three principal parts: conrods, crankshafts and camshafts. Each of these has its own production team (see Figure 3.6 for further details).

Figure 3.6: Business Unit Structure



The non-prismatic production cell has a total of 36 employees per shift distributed as follows:

- Conrods team: 16 technicians
- Crankshafts team: 12 technicians
- Camshafts team: 6 technicians
- Facilitator (cell): 1
- Conformance engineer (cell): 1

Each team has a Team *Leader* who acts in a semi-supervisory capacity for his team. The whole cell is overseen by a Cell Manager. The shift system therefore consists of separate teams and leaders who 'hand over' production between shifts.

The original efforts by the company to establish teams comprised up to 50 employees but proved to be too large to meet the company's objectives of a more-'customer driven' method of working rather than being 'process driven'. Thus optimum team size was thought to be a maximum of 15 in the interests of achieving true team work and flexibility within them.

3.2.10 Job Descriptions and Activities

The documentation on jobs as contained in traditional 'job descriptions' appears to be breaking down. The emphasis now is on identifying those tasks required for the job and ensuring that staff are flexible in terms of what they can and are willing to do.

Associates

Associates (analogous to operatives in the old system) form the bulk of the workforce in the plant and the cell. In terms of background they tend to be all men (though there is at least one woman associate on the non-prismatic cell night shift) without formal qualifications, this being especially so for the longer service staff.

When the new production system for this engine was introduced just over two years ago, those involved with machine operating and assembly work were given an eight-week training course onsite but off-the-job. This was considered necessary because of the scale differences in the production process. Hitherto the work required a high degree of physical loading and operation of equipment; under the new process it is more a question of 'machine minding' with an ability to identify problems and apply solutions by either effecting a repair or adjustment themselves or calling in one of the more specialist engineers.

Essentially the maintenance functions required of an associate have only been integrated with the production process activities to a limited extent. Tasks performed by the associates are relatively basic. New associates are now largely trained on the job. However, recruitment from the external labour market is very low at present and so it was not possible to get a complete picture of their assimilation to-the grade.

Training Plan and Record																							
FUNCTION SECTION MANAGER/SUPV SHIFT																							Date Comments
Name		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1																							
2																							
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Figure 3.7: Associates' Training Plan Pro Forma

There would be a general one-week off-the-job induction programme to the company as a whole, followed by some local job area induction. The new entrant would then be placed with a 'mentor' (normally another experienced associate) to learn the job starting with one task and then building up through the range of skills required. All this would be overseen by the team leader. Off-the-job training is still available, though it is more likely to be for specific top-up training such as in metric measurement which most associates seem to have been on.

All associates are now expected to develop a range of skills and to be competent in three core activities. There are 20 such operations devised according to the needs of the non-prismatic production cell such as: cleaning machine; loading; washing down; setting machine, etc. These are recorded by the Cell Manager on a pro forma 'Training Plan' (see Figure 3.7) against each associate. Satisfactory competence in a task enables the Cell Manager to fill in the appropriate box. Thus at a glance there is a record of those who hold the necessary competences. The training plans are updated about every 6-8 weeks. In the case study example shown, there was a varied picture displayed which would be expected given the different experiences of the employees.

The identification of the different tasks is consistent with the development of National Vocational Qualifications (NVQs). The company is developing its own company specific competences with the objective of bringing all associates to Level II qualifications. However, whilst company-specific, they have been developed with outside assistance and will be subject to external accreditation and validation.

However, despite the efforts to bring about skills flexibility, there are certain jobs in the work area that require more specific dexterity than others. 'Pin grinding', for example, was mentioned as a case where one associate (with long service and experience of the work) was almost exclusively deployed. For this person it was more a question of one core skill.

In discussions with associates in the production cell, it became clear that whilst the move to the new, more flexible methods of operation had served to enrich their work to a certain extent, it was not without its problems. This was facilitated by the desire of some associates to stay with just one main task.

Criticism appeared to revolve around the grading structure now in place which, they felt, did not give sufficient recognition to different abilities. Currently there is a five grade structure: Production associates grades 2 and 3; team leaders and skilled maintenance at grade 1; materials handling at grade 4; and with very few in grade 5, the lowest grade. The implication was that all associates were not the same in terms of their contribution to the work.

The discussions with some of the associates also revealed a largely sceptical view of the value of the PDFs. All claimed awareness of them and seemed to hold the view that whilst their take-up and use was 'voluntary', there was some compulsion to be seen to use them if individuals wanted to progress in the company. It was also pointed out that many technicians were not ambitious in this way and were perfectly happy to remain in their current jobs.

This perspective could be tied in with the common perception amongst associates that there was little real prospect of career progression. The ambitious are all competing for a very limited supply of openings as team leader. Thus the flatter organisational structure put in place by the company has, if anything, exacerbated a career blockage which is liable to worsen as expectations of associates, exposed to more learning, push themselves forward.

The route for providing information on training and staff development activities is principally the Cell Manager, though associates will use their team leaders as the starting point. Team briefings are held at the start of each shift, though these are not seen (by the associates) as the most appropriate occasion to raise personal development issues. However, there was some evidence to suggest that associates would approach their team leader for advice on job-related training.

Team Leader

Team leaders equate to a supervisory role. They are selected from the ranks of the associates and apply for the promotion. The assessment process involves an aptitude test and monitoring reports from the Cell Manager. Following short-listing by the manager, the final choice is made by the team who vote their new team leader in. There is no specific training course following appointment, development being done through mentoring and coaching. However, many team leaders choose to follow supervisory/management courses through the tuition refunds programme (ie, with financial support, though done in their own time).

Team leaders are essentially a floating resource for the particular production activity. Their responsibilities extend to ensuring that tasks are performed and work is scheduled, largely through the team briefings at the start of each shift. They are also expected to perform tasks, filling in for other team members as necessary.

In discussions with a team leader in the production cell, it became clear that the role was somewhat similar to the old supervisory job, but with enhanced involvement through making decisions on the deployment of staff. This enhancement of the job fitted into the changes in the production process. Now there was much more emphasis on 'brain' skills rather than practical skills.

The team leaders meet with the Cell Manager every shift. These meetings take place in the manager's office (which overlooks the production area) normally about 90 minutes into the shift (ie, once everything is working satisfactorily). They are informal and largely production-related, though the manager can take the opportunity of raising issues such as training and staff development matters if necessary.

Team leaders and associates are not covered by any regular appraisal system, though there are plans to extend this to all on an annual basis under the terms of the new agreement. However, it was admitted that this process might take some time to complete.

Facilitator

Each production cell has a 'Facilitator'. The role of the facilitator is similar to the role of foreman (though considerably enhanced) in the earlier hierarchy and they are responsible for ensuring that production targets in terms of volume and quality can be met through adequate supplies of labour and materials.

The facilitators are normally promoted from within and have (and need) strong experience of all the major production aspects. Here there is less emphasis on formal qualifications as opposed to job experience and knowledge. The post is the natural aspiration of team leaders in their career progression.

Conformance Engineer

Each production cell requires a more specialist resource to be available in the event of more serious machine failures and process bottlenecks. This role is largely fulfilled by a 'Conformance Engineer'.

The post is analogous to the process engineer, industrial engineer and quality engineer jobs that were prevalent in the manufacturing systems predating the new engine production operation. The postholder now will be required to be multi skilled, but to a level broadly equivalent to Higher National Diploma (HND). These posts are essentially filled by engineers with external qualifications. Augmentation of basic training is done largely through on-the-job learning supported by modular courses on specific things (eg, when a new machine or control mechanism is introduced).

There have always been engineers at this company, but the difference now is their wider range of expertise. More especially, the introduction of CNC has meant that they are more closely involved with the development of the production process than simply problem-solving. Emphasis is being placed on integrating 'product' design engineers and their activities with 'manufacturing' engineers in an initiative known as 'simultaneous engineering'.

Cell Manager

The Cell Manager has overall responsibility for the three teams within his production cell. The backgrounds of the managers vary but normally they are grown from within and are filled by those with a production background, many with qualifications in the engineering field.

The cell managers are the focus for staff development within their cell. Currently, of the total composition of the cell, only managers, facilitators and conformance engineers have an annual appraisal with their manager. The plan is to extend this to all team members as soon as possible, though participation will be voluntary. In these meetings, managers have been instructed to focus on the development of the individual. The company is only too aware of the dangers of building in career expectations that would be extremely difficult to deliver for the majority.

Managers have a crucial role to play in the dissemination of information on training and development matters to their team members. When the PDFs were introduced,

for example, all managers were given a full day's off-the-job tuition in their objectives and use. In the case study cell the information had been cascaded down to team leaders and their associates some time ago, but feedback had been minimal. It was felt that the PDF approach would worry the older, long service employees who were not seeking a career, but would just be content with fulfilling their current roles as best they can.

Of the other measures supporting self-development available, the manager would be the first point of enquiry for members of his cell. Here again the case study revealed only limited take up of schemes such as the general learning initiative. Discussions with technicians revealed only a basic knowledge of the objectives and methods of application for such programmes.

3.2.11 Role of Trade Unions

Whilst trade unions can still claim a high proportion of membership amongst production employees (figures are no longer kept by the company), their role in the development of the new working practices has been passive rather than active. Basically the three main unions with representation (principally the Transport & General Workers Union amongst technicians) were consulted and changes were introduced with trade union agreement.

This position must be seen in the context of a number of additional, largely exogenous factors including the 1980s trade union legislation and more particularly the large scale job losses in the motor industry over the past decade and the continuing poor local labour market prospects. All these factors have served to create a situation where change and adaptation are more readily accepted.

3.2.12 Synopsis

There have clearly been scale changes at case study A over the past few years which have affected the whole approach to human resource development. This is all the more remarkable given the history of the company and the often entrenched customs and practices that have had to be dealt with.

The pressures on the company to rethink its training policy in the context of employee development have been varied. In particular the highly competitive nature of the motor manufacturing business has meant that a striving for greater levels of productivity and quality has become a way of life. In the case of this firm, overmanning had been dealt with largely during the 1980s and so it has had to make more effective use of its slimmed-down labour force since then.

The introduction of new products as in the case of the new engine, provide the opportunity for the company to initiate more fundamental change. However, it would seem that the essence of such changes are organisationally based. In other words, the emphasis has been on redesigning the jobs and equipping the employees to work over a range of tasks when hitherto they concentrated on one main one. However, these tasks

are essentially job specific and may not contribute to any extension of formalised training with labour market currency (though NVQs will help here to some extent).

The main problem facing the company has been the lack of a learning culture amongst operatives and it has expended considerable resources to try and alter this. How far it has succeeded in this is perhaps too early to say. From the discussions for this case study it was evident that there is still some way to go to overcome the suspicion of some. The other problem looming is the management of the expectation of associates who, having embarked on training, find their career paths obscured by a lack of opportunity.

Aside from the learning of job-related skills, all employees have been exposed to issues of quality management and communication, for example. Thus training in these areas has assumed an important priority for the company. However, the realities of putting all employees through training courses is a problem that may take years to resolve. Nevertheless, the division examined here will soon begin a programme of development for all employees in their work teams. This is intended to provide that training required to support the individual and their role within the team and marks another indication of change in the company's training culture.

3.3 CASE STUDY B

3.3.1 General Introduction

Case study B is a large banking group in the UK and operates throughout the UK. However, whilst banking is the dominant business activity of this firm, its operations extend beyond the banking sector. The firm is essentially a holding company for a number of subsidiary businesses in the sectors of banking, insurance and investment services, consultancy in employee benefits, shipping services, vehicle rental, contract hire and retail distribution and estate agency services.

Total employment (in 1991) was just under 40,000, of whom approximately 13 per cent were working part-time. The retail banking sector dominates the employment total and a high proportion of these employees are female.

At group level, broad employment policy is laid down and one of the areas it shows a distinct commitment to is the involvement of employees in business activities, a commitment that permeates through to the support for human resource development policies. Another key area is equality of opportunity and the group's stated policy here is as follows:

" ... long-term policy is to achieve a workforce more closely matched in respect of race. sex and disability to the composition of the community it serves."
(Source: Case Study B Annual Report 1991)

In particular, the large female workforce in the financial services sector has posed problems for the company as it has done with all other banks. An over-representation in lower grade jobs and under-representation in the higher grades has created a need for special attention to career opportunities in the context of human resource development.

The Group headquarters operation has been scaled down over recent years to its current largely strategic role and this process has also been applied to the personnel and training functions. The Director of Personnel and his small team based in the London head office do not normally get directly involved with the day-to-day running of personnel and training functions within the subsidiary companies, though they still represent a central resource to be tapped as necessary.

Given the size and complexity of the group, coupled with the emphasis on divisional autonomy, it was felt that the case study should concentrate on a particular subsidiary company. After consultations with the group, it became clear that the part of the company dealing exclusively with loans offered a useful focus in that the company was self-standing and had recently undergone substantial structural change. Furthermore, there were some examples of innovatory practice in the area of human resource development that would meet with the needs of the study.

3.3.2 The Division Studied

The division is part of the Banking and Insurance Division of the Group and was acquired as a going concern in the 1980s. It specialises in the provision of consumer credit, leasing and related services.

The company essentially operates a financial service to the motor and caravan trade, offering fixed-rate hire purchase to the buyers of such products with the deals arranged through the trade and not directly to the public. This dependency on the motor trade has affected business significantly over the past two years because of the slump in consumer and business demand for new cars. However, as Figure 3.8 shows, the company managed to improve profitability between 1990 and 1991 through increasing its market share. The small fall in advances/loans, for example, is far less than the fall in new car sales over the same period.

The company is organised into a large head office centre of operations based in suburban London, supported by a network of 24 'business centres' located throughout the UK. Total employment is currently around 1200, of which approximately half are based at the head office and the remainder spread throughout the business centres (though each centre varies in size).

Figure 3.8: Divisional Business and Profit 1990-91 (Figures in £ million)

Measure	% Change
Personal loans/credit	-1.9
Advances/loans	-3.1
Profit before Tax	21.7

Source: Subsidiary Annual Report 1991

The normal business of the company involve the extensive use of information technology (IT) and since the early 1980s there has been a progressive development in IT applications as has been common throughout the financial services sector. Whilst the type of equipment being used has undoubtedly increased in its sophistication, at the same time systems have become more user friendly and so this has not necessarily translated into a need for more technically efficient staff (eg, experienced in programming). The technology has helped increase productivity and, particularly in the business centres (see below for more details), staff are expected to be able to perform more tasks associated with the IT outputs.

However, it was the reorganisation of the business in the Autumn of 1989 that largely provided the catalyst for change in the way the company viewed staff utilisation and development.

Central to this restructuring was the move away from a traditional branch structure (of which there were 47 prior to the changes) to the 24 *business centres*. The changes were

not simply about consolidating operations. The opportunity was taken to rethink the role of the regional operations and their relationship to the centre. Essentially it meant an enhanced role for the business centres, though with head office keeping relatively close control of their activities.

The branch reorganisation involved a number of other features which emphasised a new starting point for the business. The physical moves to new, larger premises certainly contributed to this effect. In addition, the teams were larger and were structured differently.

The key role of *business centre manager* was considerably enhanced with a whole tier of management removed to allow a direct and closer relationship to develop between the business centres and head office. This inevitably meant that the new management posts in the centres needed to be much more involved with the development of people as the means to control and develop business activity.

These new demands for a stronger management team based in the business centres was at the root of the realignment of the personnel and training activities at head office, though the start of the process predates this branch restructuring.

3.3.3 Personnel and Training Function

Prior to this period of restructuring, the hitherto very traditional 'training department' was renamed the 'Human Resource Development' department. It was more than just a nominal change since it reflected the company's thinking on how staff could be brought more closely in line with what the company needed for future success, allied to their own career aspirations. Self development was emphasised and there were efforts to move away from the concept of a training course as the only acceptable method of learning.

The company identified two particular weaknesses with the training course mentality, summarised as follows:

- there was no bridge between the workplace and the training course so that the learning formed an isolated experience which was difficult to apply, practically, back at the job;

- line managers, with whom remained the principal responsibility for identifying training needs, invariably described those needs in the language of training course titles.

This often led to an inaccurate identification of training need with subsequent inappropriate responses or solutions (in the form of training courses).

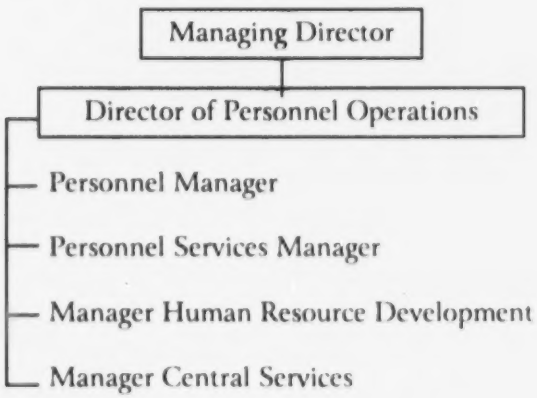
The company wished to remove itself from the inherent weaknesses in traditional training solutions where the act of putting a member of staff onto a course implied an inadequacy in the potential performance of that individual. A key to meeting this aim was the establishment of a learning resource centre at head office stocked with books, audio-visual and computer-based distance learning material and where staff could

decide for themselves (though with guidance if required) on what they felt they needed.

However, it was recognised that staff would need some general encouragement to get involved with what was after all a relatively new concept in learning style. Thus in 1989 (before branch restructuring) the process began of putting all staff through a two-day event given the title 'Delivering the Promise' (DTP for short). This event explained the objectives of self development and its crucial role in creating a 'service culture' that was an essential part of business success. The event was backed up with posters, gifts and competitions and promoted through a new in-house journal called 'Network'.

The personnel and training function is organised at head office level, providing a company-wide resource. There are no dedicated personnel or training staff in the business centres, with responsibilities lying with line managers (see Section 3.3.4 below). Figure 3.9 shows the key posts at head office.

Figure 3.9: Divisional Head Office Personnel Function



The Director, Personnel Operations reports directly to the Managing Director and the team comprises four senior managers: Personnel Manager; Personnel Services Manager; Manager, Human Resource Development; and Manager, Central Services. The post of Manager, Human Resource Development encompasses the old training manager role and the post holder has responsibility for the evelopment and implementation of all staff development activities at head office and the business centres. The post is supported by a small team of staff performing functions such as designing and delivering training and development activities, acting in a sort of 'internal consultancy' role.

3.3.4 Personal Development Programmes

Given the company's emphasis on self development in the emerging culture, it was a natural step to establish a programme which assisted individuals to take part. Thus the 'Personal Development Programmes' (PDPs) were launched in 1990. However, it is also the case that the timing of this initiative was strongly influenced by the needs of the company, particularly the new demands placed on managers as the branch network was reorganised into the 24 business centres.

The PDPs were structured around what the company calls the ten 'Key Elements', explained as follows:

- Automatic enrolment to a prescribed programme on appointment to post;
- Programmes which integrate a variety of learning methods and test a range of different skills;
- Programmes which result in an independently assessed, recognised management qualification;
- Programmes which benefit the organisation as well as the individual;
- Programmes which develop the whole person, not simply to isolate and 'cure' specific (perceived) weaknesses;
- Standardisation of core development within populations;
- Flexibility within structured programmes to account for individual strengths and weaknesses;
- Programmes which ossify existing knowledge and experience, and thereby enhance and improve management practices;
- Programmes which address development needs not only for existing jobs but also for future career progress;
- Programmes which require the learner to take ownership of their own development and which involve line management throughout.

These key elements were seen as providing the structure which would help ensure that participants achieved the desired standards of development. However, they were deliberately kept flexible to ensure that the PDPs were customised to the needs of individuals.

The PDPs were initially designed for the management strata in the newly created business centres. Enrolment on a PDP was automatic on appointment and has subsequently become part of the person's contract of employment.

The first wave of PDPs aimed at the business centre managers comprised a number of key activities summarised as follows:

- core study programmes resulting in a qualification with format and content dependent upon type of programme (the business centre managers followed the Diploma in Management Studies, for example);
- self-development modules, personalised to individual development needs and using library resource materials;
- research/project work with direct job application and with a clear and tangible company benefit (eg, designing a five-year business plan for a business centre);

- pre-determined review sessions with both line managers and core programme tutors and/or an HRD executive;
- action planning after each module to ensure application of the learning point and to demonstrate progress and understanding of the topic.

The inclusion of an externally validated qualification was seen as crucial to the success of the programmes and this fact was reinforced through the company's own assessment of the PDPs.

In this comprehensive survey of business managers who had been though the PDPs, the opportunity to study for one of the external diplomas was seen as a strong motivational factor. Elements in arriving at this conclusion included the importance of being independently assessed and to have recognition within the company (in most cases by their line managers).

The internal report on the initial PDPs concluded that the experiment was effective as a 'management development strategy'. In particular, it offered some ideas for the future development of the programmes and extension to other staff groups. One important recommendation was that the PDP should not address specific technical and job skills training, which should be covered elsewhere. It was also necessary to try and encourage continuous learning beyond the PDP so that the activity was seen as a starting point and not an end in itself.

The PDP concept proved effective and broadly popular amongst participants and has been considerably extended throughout the organisation. The so-called 'core' PDPs which include study for a professional qualification are now followed by supervisors and business managers in head office and there is a bespoke version of the PDP available to all staff.

The bespoke PDP is intended to provide some structure and flexibility to the development of all those staff not covered by the core PDP. Content is jointly determined by the employee and line manager and, where necessary, the HRD function at head office. They may include study for an external qualification, though this is not compulsory. Currently around 100 bespoke PDPs have been established and demand is expected to grow as employees become more aware of their value.

The PDP takes the form of a ring-bound file with explanatory notes and pro formas for itemising needs and monitoring progress. Those taking up a PDP will normally be given guidance from a member of the Human Resource Development team and with line manager support, though ultimately it is up to the employee to make it work and to determine the pace.

Figure 3.10 provides a summary of the structure of the PDP and how it is explained to the user. Modules are largely designed in-house and are subject to internal validation.

Figure 3.10: Structure of Personal Development Programmes

- Learner's Guide:
  - explanatory notes on the objectives of the PDP and its modular structure. Emphasises the need to complete all sections as fully as possible.
  - module: method: date: encourages the scheduling of the learning.
  - What do I want to learn? asks the user to consider exactly what is expected from this process and how will achievement of it be recognised.
  - Did I learn it? the user is encouraged to itemise the points which will confirm that the objectives have been met.
  - What now? takes the user to the next steps and encourages the drawing up of a plan of action.
  - How did it go? general reflections on the way the activities progressed.
- Affirmation of Module:
  - on completion of each module users are encouraged to sign the pro forma showing that they have understood and demonstrated the learning gained.
- Progress Log:
  - a comprehensive schedule of such factors as the starting date for each module, when resources are available and line manager review dates, etc.
- Your PDP Contract:
  - emphasises the 'contractual' nature of the PDP with support from the user's line manager and the Human Resource Development section.

On satisfactory completion of the PDP the user receives a certificate 'in recognition of commitment and achievement'.

3.3.5 Characteristics of Establishment/Work Unit

The establishment focus for this case study was a Business Centre located in the Midlands region. It is the largest of the centres and by common agreement the most progressive in terms of the adoption of human resource development practices.

The business centre was formed towards the end of 1989 through the amalgamation of a number of branches located throughout the West Midlands region. The present site was chosen as the location for the new office since it was central to the operational area, but more importantly had easy road access to all parts of the area. The decision to move to a new building rather than refurbish an existing branch office site was a

purposeful one; it emphasised the need to break free from past practices and allegiances.

The business unit is headed by a manager and comprises a total of 36 staff split between the two functions of *sales* and *administration*. Out of the total, 20 are women (56 per cent). The activities of the unit are to both attract credit business from the motor and caravan trade and to administer both new and existing clients. The two sides of the business centre work together insofar as is necessary for their work, but essentially they are discrete parts of the unit with little cross-over between them and each attracting a different type of recruit.

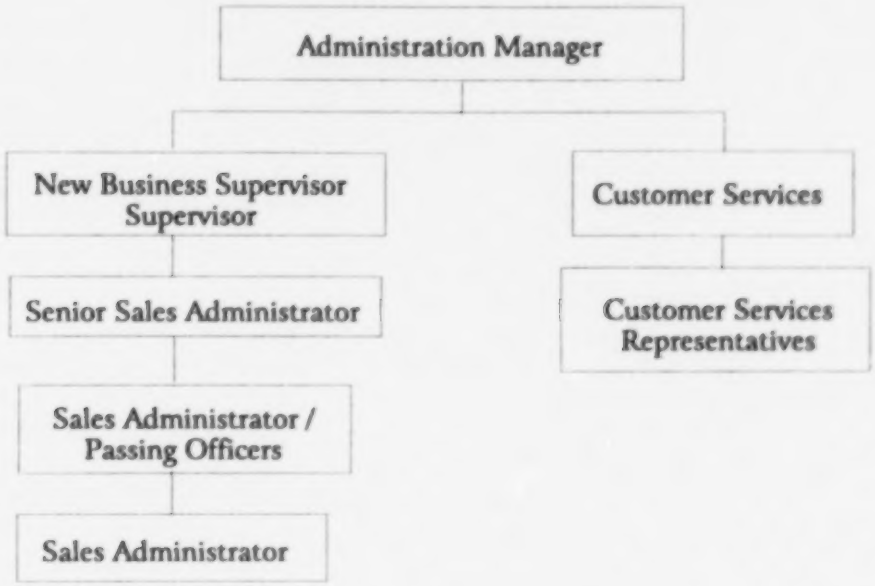
3.3.6 Administration

Figure 3.11 shows the organisation of the administrative team. There are 22 staff in all headed by the administration manager with a further distinction between the sales administrators and the customer services representatives.

The *sales administrators* have the task of processing the new credit agreements, approving applications (credit scoring) and issuing payments (cheques) to dealers (the clients). All this activity is controlled by computer systems which are organised in a basic flow-type system. An application will be entered into the system first, there will be checks made on the credit scoring of the applicant and the next stage would be to approve the deal and organise payment.

The computer technology used is considered to be the most up-to date available for this type of work, providing the opportunity of direct entry by the *sales administrators*, interrogation of databanks on credit ratings and ultimate passing of the information to head office computer records (all records are centrally maintained).

Figure 3.11: Business Unit Administrative Structure



Sales administrators are all women and the attributes looked for in recruits tend to be based on a familiarity with the keyboard and good communications skills (over the telephone). Formal entry qualifications are less important than these personal qualities, though it is usual for new entrants to have basic GCSE O levels. There is no emphasis on numeracy though clearly sales administrators do require a certain degree of ability here.

There is a formal induction programme for all administrative staff called 'Start!'. This has three parts and is largely done on-the-job under the supervision of a manager. The package is customised for each new starter through the drawing up of a training plan on arrival.

In addition, there is a company information handbook issued to all new staff and providing details on the whole group and the division in particular. Other continuous training involves occasional one-day workshops held at head office. Participation is optional.

The *Passing Officers* are those sales administrators who have progressed to certain other tasks. Chief amongst these is the authority to 'underwrite' credit applications. Most applications are straightforward and can be dealt with through the computer system. However, in the event of a referral, then it is the job of the passing officer to look into the matter and make a decision on whether the applicant is a sound credit risk. It is the passing officers' job, for example, to check the accuracy of documentation and cheques.

Approximately half the sales administration team have progressed to being passing officers and it is seen as a career progression with the posts attracting small pay enhancements commensurate with the extra responsibilities. Knowledge of the passing officer role is gathered on-the-job and without formal tuition off-the job.

Changes in the method of working came about through the development of more sophisticated computer systems. It meant that sales administrators could become more flexible in the range of tasks performed, such that they are now expected to have abilities in all major areas of administrative operations. Motivation for this flexibility has also come through the need to achieve productivity gains through the better utilisation of staff.

The workload of the business centre is cyclical to some extent, with particularly demanding peaks in July/August and December/January to co-incide with the surge of new car registrations. The centre tries to avoid the use of seasonal staff through limiting the holidays of the established staff around these crucial periods. Flexibility has therefore been necessary for business success.

Customer *Service Representatives* fall within the administrative team though differ substantially from the sales administrators function. The representatives are largely engaged in dealing directly with defaulting customers and recovering bad debts. This is thought to require a certain type of recruit with the ability to be firm yet sensitive to the customer's predicament. The posts attract mainly older workers (ex police officers fill a number of posts) though more recently it has been the practice to recruit younger people who see the role as a staging post for a career in sales.

The customer service representatives are based at the business centre, though because of the nature of the work tend to spend a significant proportion of their time on the road (for which a company vehicle is provided). Training is given on-the-job backed up by self-learning materials held either in the business centre training room or through the learning resource centre at head office. In addition there is a one week course run by Collection Managers (normally at head office) near to the start of a person's employment.

3.3.7 Sales Team

Figure 3.12 shows the organisation of the sales team. The team is headed by a manager, assisted by a development executive and a commercial executive. The field sales team is then organised into two regional groups, north and south, each with a *sales finance executive* as team leader and four area based *sales representatives* under each one. In all there are 16 in the sales team including the manager.

The sales representatives are based in their own areas and largely operate from a home base. However, drop-in facilities are available at the business centre and sales representatives are required to attend a business review meeting with their team leader (analogous to supervisor role) every week.

The training programme for the sales team is much more structured than that for the administrative team. New recruits (who usually have some similar sales background)

are immediately put on a three-month training course involving a combination of course work and exposure to the client base (normally alongside an experienced representative).

The 'Initial Winner' programme, as it is called, consists of four modules or units such as presentational techniques, and accounts and balance sheets, with off-the-job courses run at the Group training centre. After 12 months in post, there is a further sales course called 'Winner Advanced' lasting one week and where the orientation is on developing presentational skills.

Sales representatives (as well as other staff) are also encouraged to follow an external course, the 'Finance & Leasing Diploma' (validated by the Finance & Leasing Association). This is done through a correspondence course and in the individual's own time normally over a period of two years. As an incentive to complete the course, the company pays only half the costs initially, reimbursing the balance on satisfactory completion of it. An additional incentive is a cash award of £200 on successful completion of Part I with a further £400 after Part II, the final part.

Figure 3.12: Business Unit Sales Team Structure

Amongst the sales representatives there was some recognition of the PDPs, encouraged through a number of presentations they had received on the subject. As part of the diagnostic process to determine training needs, staff also completed a questionnaire providing details of their activities for head office. The idea of this was to compare the description of the tasks involved with the job as seen by the postholders, to the model job description. It was hoped that this would then lead to a more realistic assessment of the characteristics of the work and what support in the form of development was needed. This forms the basis of a PDP if appropriate.

3.3.8 Communications

Though comparatively small, the business centre recognises the need to have effective communications, especially important wen a significant proportion of the staff are in the field.

Every three months there is a general staff meeting with the business centre manager. These meetings have a fairly fluid agenda and it is possible that issues of training and staff development will emerge through this channel. However, it is more likely that staff will raise individual concerns with their immediate supervisor/manager and this will generally be on a one-to-one basis. Managers practice an 'open door' policy which, it is hoped, encourages staff to air their problems.

On the administration side of operations, the manager also holds a regular weekly meeting with the two supervisors, though this is normally business like and would not be the obvious vehicle for discussing training and related issues. Then every six to eight weeks the manager will call a meeting of all the administrative staff, but again the agenda is very much giving information on business performance and establishing targets.

Each member of staff has an annual appraisal with their manager and it is at this stage that individuals are encouraged to think about what they want to achieve and how they can go about it. Pay is kept off the agenda at such meetings (insofar as the individual allows it). Occasionally conflicts arise in what the individual would like and whether it fits with the company's needs.

Use of the core PDPs has been limited to the managers in the business centre and any initial scepticism here on their value appears to have disappeared. The emphasis in the PDP approach on personal achievements rather than identifying weaknesses was expressed as a positive feature. Bespoke PDPs are available to other staff though take up was limited in this business centre.

3.3.9 Synopsis

There have been some fundamental changes to the organisation of the business unit studied, especially evident at the level of the business centres and these changes have clearly provided a catalyst for change in the way human resource development takes place.

However, underpinning these changes has been an emerging company philosophy on training which recognises its contribution to business performance, but at the same time emphasises the need for staff themselves to take ownership of their own learning activities. This has led to the landmark introduction of the Personal Development programmes, initially tried on the business unit managers with some success and subsequently being made available to all staff in a slightly modified form.

It is arguable whether or not the reorganisation of the company and the gradual updating of the IT used has created the need for greater skills. Certainly at the business centre level there is now an emphasis on administrators performing a wider range of tasks (largely in the interests of higher utilisation but with the payback of some job enrichment), though the depth of knowledge required has not increased for most staff. If anything, the better technology has enabled some tasks to be performed without extensive training (deskilling of a sort).

However, some potentially fundamental problems remain. For example, whilst there is emphasis on self-development, much of the support for learning will still be focused on strictly job related activities. There are only limited resources in the relatively small and tightly staffed business centres for allowing staff time to learn. Financial resources may also limit the degree of firm support that can be given (though this did not appear to be a problem in the business centre studied here).

Of more potential concern arising from this size factor, however, is the real limitations that exist for career progression for those pushing themselves forward through learning. Expectations are clearly higher for those who have gone through formal training with the company and it may be difficult for the company to accommodate them. The result may inevitably be the usual reaction in a career blockage situation; frustration in the job or increased wastage as this frustration turns to job search beyond the firm. Being part of a larger financial services group may not be of much assistance here since many of the skills in this part of it are not directly transferable to other constituent companies of the group as a whole.

The company has to some extent recognised the problems caused by the development of a flatter structure. For example, it is company policy that business centre managers must have done the jobs of sales and administration managers. Also, there is a policy of secondment where staff are placed in different functions throughout the company. However, it is unclear how much these activities have taken some of the pressure off the desire for career progression.

3.4 CASE STUDY C

3.4.1 General Introduction

Case Study C is a chemicals-manufacturing subsidiary company of a large petro-chemical multinational. It is one of the largest companies in Europe and ranks amongst the World's biggest by size of turnover. The UK part is amongst the largest industrial firms in the UK.

The UK operation is organised into four main sectors of activity as follows:

- Activity 1 is a major producer of oil and gas from the North Sea. It is also involved with exploration in other UK Continental Shelf waters and on land.
- Activity 2 is the oil manufacturing, supply and marketing organisation, operating some refineries and a network of distribution terminals.
- Activity 3 has as its primary activities include the recycling of lead and refining dealing through the London Metal Exchange.
- Activity 4 manufactures chemicals at two sites and markets these products and others made at plants overseas.

Total employment within the four divisions was 12,824 in 1990 (year end), a fall of 1.5 per cent on the comparable 1989 figure.

Employment between the four business divisions is shown in Figure 3.13. Activities 1 and 2 dominate with well over one third of the employment total each. Activity 4, the chemicals operation, has around 14 per cent and the remaining 13 per cent of employment is accounted for by the corporate functions (headquarters building, etc).

Figure 3.13: **Employment by Business Activity (1990)**

Business	Numbers	% of Total
Activity 1	4797	37,4
Activity 2	4570	35,6
Activity 4	1830	14,3
Corporate Functions etc	1627	12,7
UK Total	12824	100,0

Source: Case Study C Annual Report

At corporate level there is a personnel function headed by a Director of Personnel and Administration with board status. However, the activities here are essentially 'overseeing' the work of the subsidiary companies.

At this level there are a number of core activities that are set for the whole group as follows:

- graduate and above recruitment
- pensions
- redundancy/severance terms
- counting of manpower (basic ground rules)
- management development

Changes to these policies are determined at head office level or changes to conditions are 'mandated' by head office and this would include significant changes in the terms and conditions of work at plant level.

Training policy is not a core activity other than for graduates and managers and it is left up to the subsidiaries and their constituent business units to determine their needs and how to meet them. There is a training managers' forum which meets on a regular basis for the exchange of ideas and information. It is through this type of meeting that the company tries to spread elements of good practice without imposing ideas from above.

There is no 'grand training plan', though the corporate planning process relies on the constituent subsidiary companies providing the building blocks for this through their own site-based plans. Within each of these local plans would be provision for labour needs and how they are to be achieved, with training as a key factor.

Overall the company states that it spends around 3.5 per cent of its turnover on training, reflecting the needs of the petrochemicals sector where there is heavy emphasis on safety and procedures. This emphasis is thought to inculcate a learning culture in the firm which makes employees receptive to training. It also means that the firm does not have to make significant efforts to develop a learning culture through, for example, supporting non job-related training and education.

The competency of staff in carrying out their work is of prime concern at all levels of the organisation, but it is at head office level that much of the auditing of staff competence is organised. This involves regular checks on employees to see if they are aware of procedures and requirements for performing their jobs. All activities are well documented in manuals and provide a detailed reference point for checking competence, often carried out by staff from other plants within the corporate empire worldwide. Thus whilst the auditing process is ostensibly internal, it does involve staff well removed from the plants concerned.

3.4.2 The Business Unit Studied

For the purposes of this case study, the group head office advised concentrating on a particular plant of the chemicals subsidiary as providing a good example of significant restructuring where training played a fundamental part and has continued to be an important ingredient to successful operation.

The chemicals subsidiary concentrates on the production of bulk petrochemicals and is organised into three principal business units, two of which are site based. One plant is solely a chemicals site whereas the other plant is a combined chemicals and oil site, the latter part operated by the oil subsidiary. Some basic statistics on the performance of the company are given in Figure 3.14. The figures for expenditure on capital development are particularly significant with an almost threefold increase between 1988 and 1990. This largely reflects the large sums put into updating both plants.

By contrast, the virtually static figures for sales volume and turnover between 1988 and 1990 reflect the effects of difficult business conditions over this recent period which have continued to date.

Figure 3.14: Chemicals Business Unit Performance Measures

Performance Measure	1986	1988	1990
Sales Volumes (000 tonnes)	1444	1720	1725
Turnover (£ million)	555	695	717
Capital Expenditure (£ m)	28	54	147

Source: Group Annual Report

The business unit has its own board of directors and a personnel director plus a small team in support. However, there is considerable autonomy devolved to the business units in terms of training and human resource development policy and practice. Again the subsidiary function is largely one of overseer, coupled with providing back-up advice and support when requested by the business units.

3.4.3 Characteristics of Establishment/Work Unit

The case study plant is located in the North West of England and has been operating on this large site for many years. At the peak of operations in the 1950s around 3000 people were employed there.

However, increasing production costs and the development of worldwide competition for its products meant that post 1976 the viability of the plant was always in doubt. The situation reached a crisis in the mid 1980s when the parent company took the decision to either effect fundamental changes to the organisation of the plant or, as an alternative, close it down completely.

According to industry sources, the petrochemicals business has always been subject to cyclical fluctuations with strong product demand and profitability inevitably followed by a downturn with rising costs and low or negative profitability. In the case of this particular plant, the restructuring was aimed at ensuring the long-term survival of the site through adopting a cost structure and workforce able to ride out the downturns without excessive costs.

This is not to say that the period prior to the introduction of the plant's 'Survival Plan' was not one where efforts were made to control costs. In fact the period was marked by significant job losses and restructuring, though it would appear to have been more a case of adjusting the existing system rather than attempting to bring about wholesale reshaping of the business. For example, between 1982 and 1985 numbers employed fell from 1500 to 1200.

3.4.4 Products

The case study plant has four manufacturing areas all based on polymer production as follows:

- Polypropylene
- Polyethylene
- Polystyrene
- Batch Derivatives

All are process operations basically involving the input of raw materials to a wholly automated process which, through various methods of treatment, produce the finished products. The products are known as 'feedstock' materials principally used as inputs to the food packaging and in the manufacturing and building products sectors.

Work is carried out in plant which dominates this large site, much of it new or of recent construction (the restructuring involved a programme of updating equipment). Most of the employees operate from control centres where the progress of the production can be monitored and variations identified and subsequently rectified. Maintenance tasks are carried out throughout the site as required.

3.4.5 Organisational Structure

Prior to restructuring, the plant was organised along traditional lines according to activities. The current structure is based on the four product areas (already referred to). Each is largely self-sufficient in operation though there are two other tiers in the new structure providing technical and administrative support as shown in Figure 3.15. However, the intention is to keep these support activities to a minimum. Currently there are approximately 500 employees on site.

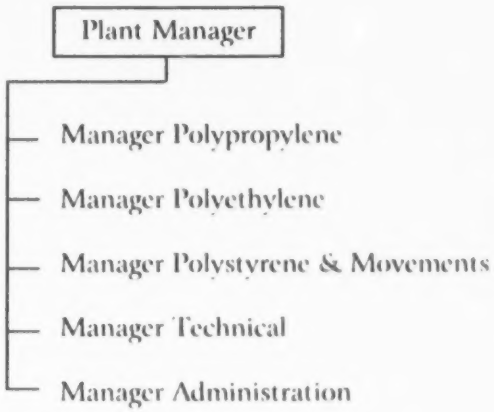
Another fundamental change brought about through the reorganisation was in the industrial relations climate at the plant. Prior to the changes the structure was again of the traditional sort with the following elements:

- 13 unions represented and negotiating as 3 groups
- 3 agreements, all involved and complex
- sub-department devoted to industrial relations activities
- fragmented weekly salary structure with many incident payments

The new system recognised the value of the trade unions and the desire of many employees to retain their representation. However it cleared away many of the historically cumbersome practices, resolving into the following structure:

- 4 unions recognised as a single negotiating group
- single agreement which is simple and competence based
- solution of industrial relations problems left to the line managers
- clean monthly salary with incident payments eliminated

Figure 3.15: Case Study Plant Organisation



The plant is more or less single status on terms and conditions of work with a contract that effectively eliminates overtime and bonus payments. There is no clocking which is a reflection on managements' efforts to bring about a 'social' system of working rather than a traditional 'managed' system. Employees are paid on the basis of a 39 hour working week but are rostered for just 37.5 hours.

All these changes are now well established but at the time of their introduction they were perceived as fundamental shifts in the way industrial relations were handled. The ease with which the changes were accepted is to a large extent accounted for by the way in which they were packaged by the company when the restructuring was first decided on. It was a case of either accept the changes or close the plant and in such circumstances in a labour market with high unemployment, there was little choice but to accept for those still with the prospect of a job. A majority of 90 per cent voted for acceptance of the survival plan and this was prior to knowing who would be offered jobs in the revised set-up.

For those without a future job with the downsized plant, the company made special efforts to assist with redeployment. This included counselling and the presence of job search advisory services on site. These factors also played their part in trade union acquiescence of the restructuring plan.

3.4.6 Personnel and Training Functions

At plant level under the Plant Administration Manager there is a *Personnel Manager* plus a team of four dealing with pay, recruitment, etc, and a *Human Resource Development Adviser* who oversees the training facility and its head. The title of the HRD Adviser post indicates the role, one of roving adviser for the resolution of issues and the provision of advice to line managers.

On the training side there is a plant Training Centre equipped for all aspects of technical training. The training centre was crucial in the successful achievement of the restructuring. The objective was to create a flexible, multi-skilled team of technicians from the core labour force of operatives and craftsmen, each working in a fairly demarcated area.

The introduction of the new technician grade co-incided with the phased manpower reductions needed over an 18 month period. A critical factor in the creation of almost 400 technicians was the design of relevant modules constructed around the production and maintenance tasks required. During this training period, a number of experienced staff were designated as 'enablers'. They tended to be in the older age categories and were given an 18 month contract during which they would instruct the new technicians in all aspects of the skills needed. After 18 months the enablers lost their jobs.

The transformation of the craftsmen and operatives was phased over a two-year period and involved each new technician receiving training in those areas where they were inexperienced. So, for example, those operatives without any previous experience of maintenance work were instructed in areas such as instrumentation, pipework, scaffolding and valves. For the hitherto craftsmen, they were put through modules on production control and other tasks concerned with the process side.

As an indication of the breakdown of tasks involved with the maintenance side of the new technicians' work, Figure 3.16 indicates the sorts of competences required for mechanical, electrical and instruments work.

To illustrate the amount of training received during this run-in period, company figures show that on average employees received about nine man days training per year prior to the changes in the mid-1980s. Subsequently, this increased to as much as 50 in the early days of the restructuring, falling back to around 20-22 more latterly.

The company felt that it was important to certificate the new technician grade and it developed its Manufacturing Certificate externally validated by the City and Guilds. There are now moves towards developing recognition under National Vocational Qualifications (up to Level III) in association with the local technical college (North Stretford) supported by EnTra (formerly the Engineering Industry Training Board) on site.

Figure 3.16: Range of Competences in Maintenance Work

Mechanical:

- Pressure valve - maintenance/inspection
- Fitting mechanical seal crane
- Mono pump removal and replacement
- Bel Tyne bag splitter - knife change
- etc, etc.

Electrical:

- Routine checks on emergency lighting
- Removal of old type light fittings and replace with CEAG fittings, including inspection of diffusers and service
- Carry out tests to verify condition of trace heating and understand basic principle of operation.

Instruments:

- Removal and replacement of flow transmitter from plant including zero checking
- Moore Mycro 352 controller introduction and calibration procedures
- Checking and adjusting snap action relay
- Removing solenoid valve from plant and replace
- etc, etc.

Figure 3.17 provides an indication of the sorts of task breakdown applied to the process side of a technicians' work. These procedures, used in the preparation of a reactor for processing, are used as a basis for assessing performance leading to certification.

In discussions with technicians in the Polystyrene plant, there was considerable support for externally validated training. This did not appear to be based on a desire for transferable qualifications (most seemed committed to the company no doubt conditioned by the fact that pay rates were high and the local labour market was depressed), but more a recognition of the quality of the training which made it more worthwhile to pursue.

Figure 3.17: Example of Tasks Assessed in Process Work

XPS U600 Workstation: Reactor Checks Prior to Charging

Objective: The trainee will demonstrate his ability to prepare a reactor to the safe, operational standard prior to charging a process batch.

Procedures:

1. Check the reactor internal condition for polymer build up, decide if a Toluene cleaning run is required, if interior is satisfactory proceed.
2. Check that any mechanical, instrument or electrical work has been completed and certified safe.
3. Check hydraulic drive (power pack) is running, the cooling water has been commissioned and the oil level is correct, adjust if necessary.
4. Check the reactor discharge, dump and Toluene valves are securely closed.
5. Check the reactor injection nozzle by flushing the line through with water until clear.
6. Check Bingham intensifier oil level, top up if necessary to oil level indicator.

A further 8 tasks are required for this particular procedure before competence is achieved.

3.4.7 Production Plant Organisation

Each of the four production plants is organised along similar lines and Figure 3.18 provides a pictorial representation of this. An overall plant manager overseas the continuous operation of the plant through a hierarchy of four under-managers as follows:

- Day Manager: responsible for the day technicians (see below for an explanation of this role)
- Shift Manager: responsible for production according to shift
- Deputy Manager: providing a service function covering aspects such as administration and quality assurance, etc.
- Plant Professional Engineers: this is a small core team of mostly graduate engineers who have responsibility for the more complex maintenance tasks

Each production unit is organised into six *technician* teams with between 11 and 18 technicians per team. The teams would each have a team leader (or possibly two) drawn from the technician ranks, with promotion to the job largely based on experience. All would be overseen by a *shift* manager, again posts mainly filled by

promoted technicians, though a few posts are held by graduates as part of their four-year post qualifying training in the group.

The innovative part of the operation is the rotating use of the technician teams. Of the six teams in each production unit, two would be deployed on days in a maintenance capacity, with the other four on shift doing production work. There is a six month cycle, with each technician doing two months on days and four months on shifts.

The basic shift system worked is as follows:

- 2 x 12 hour day shift, then
- 2 x 12 hour night shift, followed by
- 4 days off.

The rationale for this flexibility is that by ensuring that all technicians have regular exposure to all aspects of their work (ie, maintenance and production activities), jobs are enriched and at the same time skills are kept fresh.

The maintenance teams on day work are expected to be able to carry out 80 per cent of the regular work involved in the particular work station they are based in. The remaining 20 per cent of jobs are the more specialised tasks left to the qualified engineers.

On the process side, technicians are expected to be proficient in three aspects of the process work in their particular work station. This is a minimum requirement and some are able to do more.

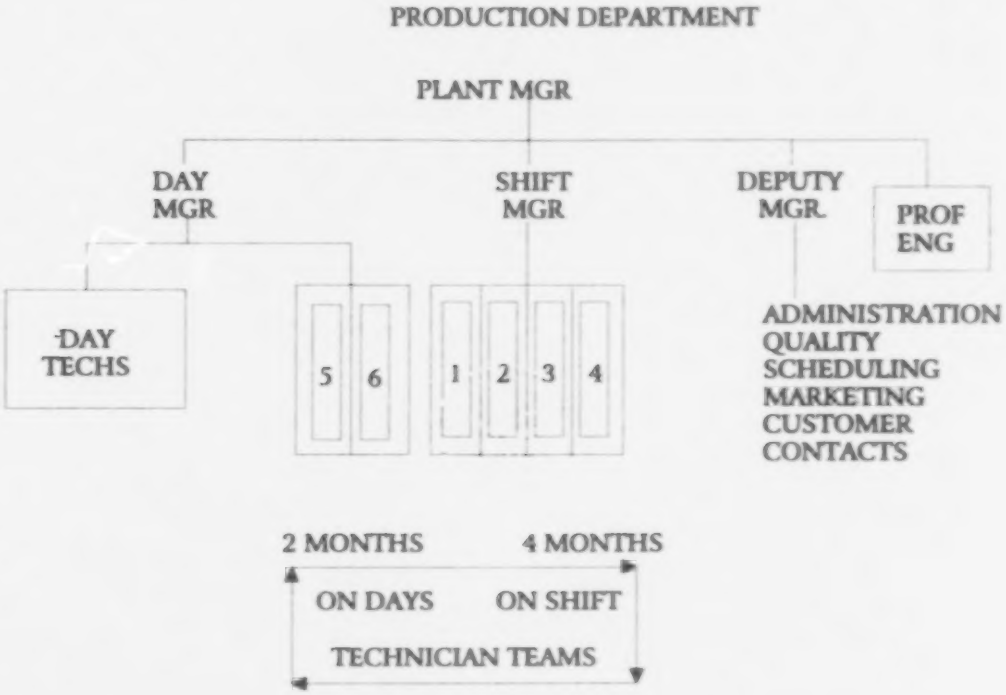
In order to achieve proficiency, the technician training involves three key elements as follows:

- On-the-job engineering skills (of which there are 28-36 tasks and proficiency in 80 per cent of them is required)
- On-the-job process training (there are 31 process jobs and proficiency is required in 3 of these)
- Off-the-job modules in all of these run at the plant Training Centre.

Most technicians have been with the firm since the changes were introduced (scheduled over a period of two years ending in 1987) and so have been through this training schedule. However, it is still used for new entrants (48 people have been recruited since 1985, including 30 who were trained up) and for updating the skills of those longer service employees or for those moving into new areas.

In discussions with technicians in the Polystyrene production unit it was evident that the changes they all had been through were fundamental. However, they were generally of the opinion that it equipped them for a more interesting role in the firm and made them aware of the advantages of training. However, it was also true that training had always been part of their job and being put through the technician training process was not a major departure for them.

Figure 3.18: Case Study C Production Plant Organisation



The technicians workforce comprises those staff with craft skills backgrounds (accounting for around one third) and operatives background (two thirds)yet there was no discernable difference of view on the new technician role. It might be expected, for example, that those time-served craftsmen may be more reluctant to accept a dilution of their skills, but this did not seem to be the case now (though it was more of an issue at the time of the changes).

3.4.8 Communications

The company has adopted a structured approach to communications within the plant and it is essentially of a top-down variety. There is a Central Management Team meeting every Monday to discuss production and other issues. This is followed by a meeting of line managers in the afternoon of each Monday where information is relayed and discussed. Meetings between production teams and shift managers take place on a monthly basis, but are fairly open-ended and it is possible that training issues are raised here.

Personal issues to do with training and staff development in general tend to be raised with shift managers rather then team leaders. However, the main vehicle for such

issues is the annual staff appraisal. This takes place between the shift manager and technician and culminates in a mutually agreed assessment of the individual. This can go on to provide an 'action plan' for training and other development activities over the next year.

Attempts are made to keep issues of pay free from the appraisal system and this to some extent is facilitated by a relatively simple grading structure.

There are just three grades of pay for technicians, the highest of which is taken by team leaders. There are no separate shift premia. Those working shifts for part of their time would get a proportion of the shift premium averaged over a year. The difference between the three grades is around £2000 per annum. There is some discussion at present about the need for grade enhancement to reflect a discretionary pay element. This is likely to be achieved through the payment of a 'supermax' supplement in two points, each of around £500 which would probably affect around 30 per cent of the technician grade.

3.4.9 Synopsis

There is little doubt about the scale of the changes wrought at the case study plant. The process of restructuring and the subsequent modernisation plan have been achieved in difficult times for the chemicals industry and the plant has provided a model for others in the group to follow.

Nevertheless, it is also obvious that the changes were more readily accepted by the workforce and their representative unions when the alternative was no jobs with the closure of the plant. Given the relatively poor labour market prospects in the area there was little alternative but to accept what was suggested.

In the event, the degree of flexibility achieved is remarkable in the mix of process and craft-based tasks. What is more, this mixture is sustained through an ingenious shift and rotation system that ensures all technicians are exposed to both process and maintenance tasks on a six-monthly cycle. The multi-skilling in place is not simply a case of a wide range of basic skills, but of high levels of proficiency and the ability to make decisions in often difficult and potentially hazardous circumstances.

However, the acceptance of training in the plant is a characteristic of an industry where there is so much emphasis on procedures, primarily in the interests of health and safety. Workers can only survive such an environment if they are willing to learn and follow procedures, often documented in manuals and supported by off-the-job training modules. In effect, a training culture already existed before the survival plan of the mid 1980s was raised. Nevertheless, the retraining was a departure in that it was competence based and subject to evaluation.

The achievement of skills flexibility at the case study plant has been accompanied by single status conditions of work. However, there now appears to be some pressure on the system for recognition of extra performance and length of service, partly arising from the somewhat limited promotional opportunities that exist. This has given rise to

the limited moves towards some kind of performance related pay element (the 'supermax').

3.5 SUMMARY

These case studies set out to fill some of the gaps in current knowledge on how vocational training in firms was organised, the reasons behind the approaches adopted and the mix between formalised and less structured training practices.

Naturally it is difficult on the basis of just three case studies to generalise the findings to other firms or sectors. Nevertheless, it is possible to highlight some of the more obvious contrasts in experience which came through the detailed case studies.

In the two manufacturing sector firms, much of the impetus for the recent changes in the approach to human resource development have been 'market' led. Both case studies A and C operate in an increasingly competitive environment and change was seen very much as a prerequisite for survival in the market place.

In the case of firm A, it was primarily foreign competition and the example of Japan with its high levels of productivity that serve to highlight the company's vulnerable position. The situation was reinforced by the growth of Japanese motor manufacturing in the UK and the firm's own association with it.

For the plant studied in cases study C in particular, the downturn in the global demand for chemicals was at the root of the changes wrought in the mid to late 1980s.

Business pressures had also persuaded the subsidiary of the case study B to restructure and modify its usage of staff, though the opportunities presented by the extensive use of IT were also a significant push factor.

In many ways these business pressures, which have been accompanied by relatively poor labour market prospects in areas of the UK where the two manufacturers have their main plants, have allowed quite fundamental changes in the size and type of workforces to be pushed through relatively unhindered. For example, trade unions have not been key players in any of the case study companies during these transitions, though remaining firmly in the background for the manufacturing companies.

Whilst all the case study firms went through the cultural changes that provide the necessary foundation for change, some had further to go than others. In case study C the need for continuous learning was prevalent and gave a solid base from which to develop new skills and widen the scope of training. It did not seem to matter that much of this acceptance of the need to update skills and knowledge was based on the needs of health and safety training in a potentially hazardous industry.

By contrast, in case study A there did not exist this strong awareness of continuous learning and so the company has attempted to generate one through a whole series of measures including the innovative programme which supports non job-related learning. How successful the company has been at raising the recognition of the need to train is

difficult to judge. There would appear to be still some problems of scepticism amongst the lower grade employees, with the fundamental problem looming of how the expectations of staff are to be managed if it does work and there is a rising tide of employees demanding career progression commensurate with their new qualifications.

In terms of the development of broader based skills, all three case study firms have gone some way down this route. In case study B, for example, administrative staff in the business units were expected to perform a range of tasks, interchangeably as required by the day-to-day business needs of the unit. However, the skills were comparatively low level and acquired on-the-job.

The skills required by the average technician at case study A were broader than had been the case three years ago, though were often of a lower degree of complexity. Whilst the traditional craft demarcations have been broken down, there are still specialist jobs that are carried out by dedicated (and more highly skilled) engineers.

This is also true to some extent in the case study C plant, where efforts at introducing multi-skilled operatives has been most successful. Each of the production teams are supported by day engineers who carry out the most complex maintenance tasks. However, the firm has achieved a high degree of flexibility in their production teams through a combination of retraining and work organisation. The rotating shift system over a six-month cycle ensures that technicians are exposed to the wide range of tasks they are expected (and trained) to perform.

In all this, the external recognition of skills and competences is important to all three case study firms. In firm B, for example, managers going through their Personal Development Programmes rated following a prescribed course leading to an externally certificated qualification as very important as a motivational factor and for a variety of reasons.

Case studies A and C have chosen to go down the National Vocational Qualifications route where qualifications will be developed with outside involvement, though essentially remaining customised to the individual firm (and plant in many cases). Again the reasons for this preference are varied and include the need to motivate staff to follow the training, given that most employees would see the external qualification as having greater credibility in the external labour market.

SECTION 3 :

OVERVIEW AND SYNTHESIS

4.1 INTRODUCTION

This summary report brings together the main findings from the two parts of the study into process of acquiring skills and qualifications in British workplaces. The first part provided a macro overview of the national situation, whilst the second phase of the work involved in-depth assessments of activities and approaches of three large companies.

4.2 NATIONAL POLICY

There is no provision for the acquisition of formal vocational qualifications during the period of compulsory education (ages 5-16). All such activity takes place post-16, principaliy through colleges of further education. This policy is, however, currently (1993) under review and regulations may be changed to allow 14-16 year olds to study for vocational qualifications.

One of the key criticisms of the British system is that it does not encourage a high take-up of vocational education and training. This is often attributed to a lack of transparency and coherence in the British system and has been a fundamental reason behind the setting up of a National Vocational Qualifications (NVQs) system in the late 1980s.

NVQs were intended to overcome some of the inhibitions to training, offering a departure from traditional courses and basing the design on competence-based assessment, thus opening up the acquisition of qualifications to a much wider market.

Nevertheless, the main route for initial training remains through government supported programmes such as Youth Training, carried out within the workplace, supported by off-the-job tuition. This has caused some concern that the anticipated flows of new skills is only sufficient to maintain present stocks at their comparatively low level rather than augmenting supply.

The deficiency in training has been recognised for some considerable time. This has led to a variety of approaches to try to encourage employers to invest more in training. Training levies (administered through the Industrial Training Boards) have all but disappeared in favour of a voluntarist approach using the newly established Training and Enterprise Councils (TECs) in England and Wales and their counterparts in Scotland, the Local Enterprise Companies (LECs).

4.3 ADULT TRAINING

The low levels of initial training puts more emphasis on the need for adult training in Britain. Here reliable information is hard to come by. Traditional methods of measurement which rely on those achieving certification in their training does not allow for the considerable base of skills gathered during work but not necessarily certified. However, productivity comparisons would suggest that Britain's uncertified skills are not comparable to certified skill levels in countries such as Germany.

Around half the British workforce receive some training according to broad indicators. However, most training is given to those already in possession of formal qualifications and so does not tend to overcome some of the problems associated with the lack of any formal training amongst the adult workforce.

There is also considerable variation in the levels of training by sector reflecting not just differences in capital and process needs. A key difference emerges between the public and private sector employers, with the former more likely to encourage wider, though less intensive training whereas in the private sector the emphasis is on intensive, targeted training.

4.4 DEVELOPMENTS

Pressure from the demand side for greater analytical skills and aptitudes from employees, as well as greater flexibility across a range of tasks, has led to increased awareness of the need for continuing education and training. Employees are also beginning to realise the value of formal qualifications as a measure of their own achievement and as a currency in the labour market.

4.5 CASE STUDIES

A detailed series of discussions were held with three firms (two in manufacturing, one in the service sector) at a variety of levels in the organisations concerned, though concentrating on a workplace. The case studies involved managers and employees, supported by observation of the work process and the examination of back-up secondary source material.

In all three firms there had been significant changes in their attitudes and policies towards continuous training, much of which was still on-going.

In the two manufacturing firms, much of the impetus for this change had been market led. Both firms were facing increased international competition for their products and adaptive human resource policies were considered essential for survival in the market place. This comparative element was also reflected in the push for productivity levels at least to those of Japanese and German manufacturers.

Competitive pressures were also at the root of changes in the financial services case study firm. The market for this firm's services was essentially domestic (dependent to a great extent on sales of motor cars). The firm adopted a strategy of branch consolidation, more flexible use of staff and taking advantage of the opportunities presented by the development of new information technology.

4.6 LABOUR MARKET FACTORS

These competitive pressures have been accompanied by relatively high unemployment in those parts of the country with establishments from the case study firms. This has undoubtedly allowed some quite fundamental changes in the size of workforces and

their utilisation to go through quite unhindered. This is illustrated by the generally low-key role played by trade unions in all of the case studies during this transitional process, involved more in consultation rather then joint determination.

4.7 Cultural Change

All the case study firms went through some degree of cultural change that was considered a prerequisite for changes in human resource utilisation and development. However, some had further to go than others.

For example, in case study C, the chemicals plant, there was a long-standing provision of continuous training arising from the need to update skills and knowledge in a potentially hazardous manufacturing environment. This provided a solid base for developing new skills and to widen the scope of training, though the move to a competence-based system was wholly new.

In contrast, at the case study A engine manufacturing plant, there was little traditional awareness of the need for continuous training. The company had therefore to expend considerable resources on generating an understanding by encouraging participation in non job-related learning. It is perhaps too early to assess whether this has achieved its objectives; considerable scepticism amongst lower grade staff about the new training process emerged in the discussions.

One fundamental problem that all case study firms face is that of managing career expectations as training develops. Employees will be looking for development opportunities (and pay enhancements) commensurate with their new skills and qualifications and most firms will find it extremely difficult to meet them.

4.8 Skills Flexibility

All three case study firms had gone some way towards developing broader based skills. In the financial services case study (B), administrative staff in the business units (regional offices) were expected to perform a range of relatively low level tasks, moving between them as business needs demanded. Preparation for this was through on-the-job training and was not certificated.

In firm A, technician skills were much broader than had been the case three years ago, though largely at a lower level of complexity. Even though traditional demarcation between skills had been eroded, there was still a group of specialists retained for the more complex tasks in repairs and maintenance.

However, it was in case study C that efforts at introducing multi-skilling had been most successful. It was achieved through a combination of work reorganisation, retraining and significant capital investment, and sustained by a shift system that ensured technicians were exposed to all the tasks they were supposed to be competent in on a six-month cycle.

4.9 CERTIFICATION

The importance of the external recognition of skills and competences was important in all three case studies, though with different emphases.

In case study B, for those undergoing the bespoke personal development programmes, pursuing a certified external qualification was identified as a very strong motivational factor in undergoing training.

In the two manufacturing case studies, there was more interest in the competence-based National Vocational Qualifications system which offered customised qualifications on a firm or establishment basis, though with considerable outside assistance from training providers. It is useful to note that this external involvement was considered essential to give credibility to their training.

4.10 SUMMARY

The case study findings were broadly consistent with some of the national trends reported in the macro study. Nationally there appears to be evidence of increasing recognition amongst employers of the importance of raising levels of skill through improved company training, and this applies particularly in the larger enterprises and those exposed to growing international competition. The three large concerns investigated for this study all placed human resource development high amongst their corporate priorities and had taken a variety of steps towards enhancing the skill levels of their employees.

The macro picture shows that the extent of training activity in firms tends to vary by sector, with firms in the energy/chemicals sectors showing a higher propensity to train than those in the engineering sectors which, in turn, are more likely to invest in training than in the financial services sector. The case study firms conformed to this pattern.

The case studies also confirmed the findings of the macro study as to the extent of informal training and training not leading to certification. Although each of the firms studied were increasing their use of formalized training courses, much of the training was still relatively informal and uncertificated. There is a tendency for firms to prefer training which is highly job specific and non-portable and thus less likely to lead to lost investment through labour wastage. The training provided in the firms investigated here was mainly, though not exclusively, of this sort. The preference shown by the employers for certification by NVQs may be linked to this factor in that the NVQ system allows training to be customised to the individual needs of enterprises and to remain highly job-specific.

In one respect, the case study firms diverged from the general pattern reported in the macro study. In the firms, training efforts were more evenly distributed between new and established employees and between those with or without prior training and qualifications.

Increasing flexibility in the deployment of human resources has been a major concern of many enterprises seeking to improve their competitive position. However, research into flexible working in Britain has suggested that the trend is very uneven, both as regards numerical and functional flexibility (eg, Pollert, 1988). Studies by the Institute of Manpower Studies (1985) and NEDO (1986) have suggested that the use of part-time and temporary staff in manufacturing did not increase significantly during the first half of the 1980s and that there was only a limited move towards functional flexibility in most firms surveyed.

Most of the occupational flexibility has been confined to the production/maintenance boundary, with little change towards multi-skilling in the engineering and craft areas (Cross, 1987). The case studies reflected this pattern.

In the two manufacturing case studies, there was no evidence of movement towards numerical flexibility, but rather an attempt to raise productivity by shedding labour. However, in one case (A) the slimmed-down workforce were being offered job security in return for greater functional flexibility.

All three case study firms had a training policy dedicated to producing more multi-skilled and flexible employees, though in practice the degree of multi-skilling was fairly limited in all but one case. In both firms A and B, the trend was towards 'low skills' flexibility where employees were deployed across a variety of tasks at a relatively low level of skill. Much of the training effort was devoted towards developing more flexible attitudes to work rather than to developing a wider range of higher level skills.

The tasks of operators at the case study A plant, for instance, included only the most basic maintenance functions. The programming of CNC machines, for example, was not amongst the tasks performed by craft workers unlike in the German plants studied by Sorge, et al (1983). The case study C plant was the only one of the three to yield evidence of higher-level multi skilling. Here all operators and craft employees had been regraded as technicians and were responsible for a wide range of skilled production and maintenance tasks. The intensity of in company training required to achieve this level of multi-skilling was at a commensurate level.

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ABBREVIATIONS

CNC	Computer Numeric Control
CSO	Central Statistical Office
EC	European Community
ET	Employment Training (Programme)
GCSE	General Certificate of Secondary Education
GDP	Gross Domestic Product
HNC	Higher National Certificate
HND	Higher National Diploma
HRD	Human Resource Development
LEC	Local Enterprise Company
MSC	Manpower Services Commission
NCVQ	National Council for Vocational Qualifications
NIESR	National Institute for Economic and Social Research
NVQ	National Vocational Qualifications
PDF	Personal Development File
PDP	Personal Development Programme
PSI	Policy Studies Institute
TEC	Training and Enterprise Council
TERN	Training & Employment Research Network
TQ	Total Quality
TQI	Total Quality Improvement
TQM	Total Quality Management
TVEI	Technical Vocational Education Initiative
YTS	Youth Training Scheme

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Kenneth Walsh
Andy Green
Hilary Steedman

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